DOCUMENT RESUME

ED 335 255 SO 021 306

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TITLE Understanding Culture: A Pre-Condition for Effective Learning.
INSTITUTION United Nations Educational, Scientific, and Cultural Organization, Paris (France).
PUB DATE Jan 90
NOTE 101p.; A study prepared for the World Conference on Education for All (Thailand, March 5-9, 1990).
AVAILABLE FROM United Nations Educational, Scientific, and Cultural Organization, 7, Place de Fontenoy, 75700 Paris, France.
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Comparative Education; Cultural Background; *Cultural Influences; Educational Anthropology; Elementary Secondary Education; Foreign Countries; *Foreign Culture; *Learning Strategies; *Learning Theories; Teaching Methods

ABSTRACT

This paper is concerned with the cultures of learning and the customs of learners. A distinction is drawn between the base learning culture of the learner as that which represents the knowledge, learning orientations, and strategies the learner brings to a learning situation, and a cultural learning posture that comprises the knowledge, learning orientations, and learning strategies of the educators. The base learning culture represents what the learner brings to the learning event. The cultural learning posture represents what the learning event brings to the learner. A wide variety of base learning cultures and cultural learning postures from around the world are examined in terms of knowledge content, learning orientations, and learning strategy. If effective learning is to take place by all, then those who bear responsibility for educating need to apprehend the cultural base of the learner and to present elements of the cultural learning posture that seek to share with the learner in a way that connects with postures previously encountered by the learner. A 63-item list of references is included. A paper by G. R. Teasdale "Interactions Between 'Traditional' and 'Western' Systems of Learning: The Australian Experience" also is included as an appendix. (DB)

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A Special Study for the WORLD CONFERENCE ON EDUCATION FOR ALL (Thailand, 5-9 March 1990)

UNDERSTANDING CULTURE :

A Pre-condition for Effective Learning

by Angela Little

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United Nations Educational, Scientific and Cultural Organization

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Also included, as an appendix, is a paper by G.R. Teasdale, (Flinders University of South Australia), entitled :

Interactions Between " Traditional " and " Western " Systems of Learning : The Australian Experience.

January 1990

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Understanding Culture: a Precondition for Effective Learning

Summary

Culture, broadly defined, is often invoked as an explanation of past failure rather than success, of present problems rather than achievements and of future difficulties rather than possibilities. This paper is concerned with the cultures of learning and the customs of learners. A distinction is drawn between the base learning culture of the learner which represents the knowledge, learning orientations and strategies which the learner brings to a learning situation, and which is shared among members of the social group to which the learner belongs and a cultural learning pasture which comprises the knowledge, learning orientations and learning strategies of the educators. Every learning event involves an encounter between the learner, his/her base learning culture and a cultural learning pasture which may be more or less remote from the pasture which gave rise to the base learning culture of the learner. The base learning culture represents what the learner brings to the learning event. The cultural learning pasture represents what the learning event brings to the learner.

A wide variety of base learning cultures and cultural learning pastures are described in terms of their knowledge content, learning orientations and learning strategy. Examples are drawn from the in-school and out-of-school learning cultures of young learners from African communities (the Kpelle of Liberia, the Yoruba of Nigeria) to illustrate the range of knowledge goals

embedded in learning systems. The knowledge dualism between school and out-of-school learning which has characterized many societies throughout the 19th and 20th centuries is highlighted. Yet parents value both systems for the different types of knowledge and opportunity they afford.

The review of work on learning orientation discusses research on achievement motivation, drawn mainly from the post-primary cycles of education. The ethnocentrism of early definitions of achievement motivation is highlighted as is the complexity and non-universal nature of patterns of learning orientation. Learning to demonstrate ability and achieve publically acknowledged success represents just one orientation to learning. Others include the desire to master a task and to attain social approval from others. While the strength of these vary from culture to culture, so too do their interrelationships. The implications of these learning orientations for other aspects of personal and social development are explored with special reference to data from Japan, Malaysia and England.

Implicit in both the what and why of learning are cultural definitions of what constitutes education, learning, achievement and ability. Examples drawn from Nigeria and the Philippines, redraw our attention to the contexts in which the outcomes of effective learning are realised.

The review of work on learning strategies draws from anthropological and psychological research from Nigeria, Colombia, Mexico, Sri Lanka, Guatemala and Liberia, and focuses

on the degree and nature of adult involvement in learning events and the ways in which they structure and support the learning of the child.

Mastery, criterion-referenced learning characterises the assessment implicit in much out-of-school learning. By contrast the outcomes of in-school learning are normally assessed through norm-referencing. Part of the assessment dilemma faced by educators in the formal school system results from the demands placed on the school to simultaneously educate and select, a tension which may lead in turn to mastery learning for a few and ineffective learning for many. Moreover the explanations learners adduce for their success and failure in learning may have important implications for their long-term motivation. The widespread belief in the efficiency of effort and motivation for success which may have underpinned the phenomenal expansion of education systems over the past twenty years.

Having described cultural learning pastures in terms of a range of learning content, orientation and strategy some broad contrasts are drawn and questions raised about the interaction of alternative cultural learning pastures. Two recent examples of interaction are drawn from non-formal education and two from formal education. Each illustrates different aspects of the process of educational borrowing and lending between learning cultures. The first, Suzuki-method violin teaching in the United States of America, illustrates how a learning strategy borrowed from traditional and contemporary Japan has been adapted to the educational values and practices of contemporary American

society. The second, the emergence of "two-way" school among Aborigines in Australia, illustrates how "lending" of learning content, orientations and strategies on the colonisers terms led to cultural rejection, and the emergence of a contemporary philosophy and model for Australian Aboriginal education created collaboratively by white and Aboriginal educators. The third, bi-cultural and bi-lingual programmes for education in Latin America involves a deliberate integration of the learning content of out-of-school learning cultures with the content of formal school learning. The fourth example illustrates the borrowing of "traditional" communication strategies for the transmission of "modern" knowledge in a non-formal learning culture.

In the final section, a number of implications are drawn for future action. At the level of interaction between educator and learner it is suggested that all learners (whether as children or adults) approach new learning pastures with a wealth of learning experience behind them on which educators can build. Learners continue to feed from three or four cultural learning cultures simultaneously - the learning programme/institution, the home, the workplace, the community. All become part of the indigenous learning culture on which the educator can build. The indigenous is not static but changes with daily experience and becomes the base from which the educator must build. A review of examples of cultural borrowing and lending leads to two general considerations of significance to representatives of alternative and interacting cultural pastures. First is the suggestion that although borrowing and lending are two sides of the same coin,

paradoxically these two sides are stamped to a different value. Borrowing and lending imply different levels of initial economic and political interest on the part of the borrower and lender, different economic and political obligations and different long-term economic and political motivation. Second is the suggestion that the integration of cultural pastures may be most fruitful when those who seek integration are those who will be responsible for the implementation of the integrated content, orientation and strategy. Decisions about re-negotiated curricula which exclude the teachers are likely to fail. The principle of building on the indigenous, to responding to requests for borrowing and to involving teacher implementors in decision making is likely to lead in practice to a number of adjustments in the way aid for education and development is negotiated. The development and implementation of projects through local (not necessarily national) control of learning content, orientation and strategy will be slow, gradual, conflictual and unlikely to lead to the calculation of a rate of return in the short-term. Some of these adjustments will result from a resolution of tensions between international and local concerns which are apparent in the EFA policy. Seven such tensions are identified.

Finally it is suggested that effective learning for all which arises from the base learning culture of the learner requires a reversal of the dominant flow of educational ideas and practice between industrialised and developing countries, and between university elites and teachers. Western educational theories require reconstruction, new strategies for the exchange of

theories, philosophies, techniques and practice need to be created and an improved understanding of the culture-bound and culture-free nature of educational practice and change generated.

In their search for cost-effective technical panaceas for "universal" problems, many international change agents borrow an apparently successful strategy or policy from one culture and elevate it to the status of international policy having universal application. The economic question is: under what conditions is such elevated decontextualisation cost-effective, and under what conditions is it cost-ineffective? The cultural/political question is: who is borrowing and who is lending what and on whose terms, and why?

Understanding Culture: A Precondition for Effective Learning

> "The effects of socio-cultural...factors on school wastage in Ethiopia could be considerable. Religious and social customs of early marriage and preventing girls to mix with boys after a certain age are still widely practised in some parts of the country... . For example in some **awragas** in Bale region where the majority of the population is Muslim, the percentages of girls is as low as 15 or less while the regional percentage is about 39.5.... . The customary expectation for a male child to assume the economic responsibility of helping the family after a certain age, and for over-age pupils (who make up about 25% of the primary enrollment)... . to be ashamed of sitting in the same class with children much younger than themselves.. could also cause dropout." (Worku 1989).

This assessment of the impact of socio-cultural factors on school wastage constituted part of a broader discussion of the policy options for the expansion of primary education in Ethiopia under financial constraints. It acknowledges social forces mitigating against the achievement of education for all, some of which prevent children from being enrolled in school at all, and others which ensure early dropout from the school system. The assessment is competent, realistic and typical of the dominant framework within which the relationship between culture and education is located. Culture, broadly defined, is invoked as an explanation of past failure rather than success, of present problems rather than achievements and of future difficulties rather than possibilities.

I would like to thank colleagues who have contributed to this study through discussion and the sharing of materials - in particular Sheila Akeman, Trevor Coombe, Ken Cripwell, Zainal Ghani, Janet Jenkins, Anna Obura, Sybille Reidmiller and Bob Teasdale.

In this paper I suggest that culture is a general term which needs to be unpackaged if it is to be useful, that an understanding of culture helps educators appreciate the conditions from which learning must start, and that such understanding, while difficult and slow, may lead to a positive rather than negative role for culture in the education process - and in the achievement of long term and sustainable development.

Unpackaging Culture

"Culture" means all things to all men (and women). The term is used to explain everything... and nothing; to justify segregation... and subjugation; to encompass national values.. and anti-national values; to claim rights for some... and rights for all; to mean "a total way of life of a people" and hence to include all knowledge, language, beliefs, art, morals, laws and customs, from the mundane to the sophisticated. Academic discussions of the concept of culture, of the distinctions between values and culture, of its subjective and objective aspects, of its applications to society, schools, teachers and social classes abound. Kluckholn's 1951 definition is widely quoted:

> Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values. (Kluckholn 1951)

Hofstede, a social psychologist, defines culture as "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede 1980). He

confines his use of the term to the culture of national groups, acknowledging that the definition can be applied equally to sub-national or sub-cultural groups. Musgrove defines culture simply as "the customs of a group of people" (Musgrove 1982 p.115).

In this paper I am concerned with the cultures of learning and the customs of learners. My working definition is that culture represents the knowledge, learning orientations and strategies which a learner brings to bear on a learning activity. These can be referred to as the **base learning culture** which the learner uses to construct and adapt to learning events. The base learning culture is shared among members of the social group to which the learner belongs. Every learning event involves an encounter between the learner, his/her base learning culture and a **cultural learning pasture** which may be more or less remote from the pasture which gave rise to the base learning culture of the learner. The base learning culture represents what the learner brings to the learning event. The Cultural learning Pasture represents what the learning event brings to the learner. Cultural learning pastures comprise the knowledge, learning orientations and learning strategies of those who currently feed from that pasture, the educators among them. In a static society which reproduces itself perfectly the gap between the base learning culture and the cultural pasture is relatively narrow. Although the learning gap may appear wide to the learner, the educator can readily apprehend the language and concepts of the learner and can build from them in a way which makes learning effective. The learning gap can be bridged. Where a learner

encounters a cultural pasture shared by members of a social group radically different from that of the learner, the language and concepts on display may be so unfamiliar that both learner and educator experience difficulty in making contact with each other. The learning gap cannot easily be bridged.

In subsequent sections of this paper I characterise the diversity of cultural pastures encountered by the learner in terms of their knowledge, learning/teaching orientations and learning/teaching strategies. Since all differences highlighted are drawn from snapshots at single points in time it is not possible to identify whether they represent differences between the base learning cultures of learners or differences between the cultural learning pastures encountered by them. From the point of view of the learning process and the educator the distinction is not important. The base learning culture of the individual learner is changing constantly. The effective educator's role is to apprehend the base learning culture as it develops and to present elements of the cultural pasture he/she seeks to share with the learner in a way which connects with pastures previously encountered by the learner. Effective learning involves the achievement of a succession of dynamic equilibria between learner and educator. If the gap between the base learning culture and the cultural pasture is too wide then these learning equilibria will not be achieved, and learning will become less and less effective.

The terms learning and school education are not used synonomously

in this paper. While learning occurs in school, it also occurs in a variety of settings out of school. Moreover attendance at school does not guarantee that learning takes place.

The Knowledge Content of Learning - the What of Learning

Learning implies that there is something to be learned, whether an historical fact, a scientific principle, a national symbol, a riddle, a proverb, a navigational aid, a farming practice. In this section I suggest that educators may have underestimated the functional knowledge which learners bring to formal schooling, acknowledge that parents value the knowledge which schooling affords and suggest that the learning of the latter may be more effective if linked more closely with the former.

In one of the most celebrated studies of learning in a non-Western culture, Gay and Cole (1967) describe the learning of mathematics in the out-of-school learning culture of the Kpelle of Liberia. They demonstrate the very high ability of illiterate and un-schooled Kpelle adults to estimate the number of cups of dry rice in a bowl of uncooked rice, they describe their classification and counting systems, their geometric terms, the mathematical abilities learned implicitly through imitation and repetition, through concrete, practical and non-verbal activity. They also describe the more formalised learning system afforded by the Poro or Bush School where the child builds a home in the forest, farms, hunts and is taught about sex; where the "secrets" of the Kpelle way of life are revealed - the existence and nature of the "forest thing" or masked spirit, the music that accompanies the appearance of the forest thing, the ritual

behaviour by which members identify each other, the techniques of scarification, and the knowledge of special medicines and charms. Prescribed by the elders whose authority is never questioned, these skills and knowledge have enabled the Kpelle people to survive and sustain their way of life.

Such "indigenous" learning contents will vary from society to society and cultural group to cultural group. Callaway reminds us

> It is obvious that indigenous education varied to the same extent that societies differed from each other. A child growing up in a hunting band of Mbuti pygmies learns a different body of knowledge and a different set of skills from a child of the agricultural, political centralised kingdom of the Ganda (Callaway 1975 p26).

She described learning among Yoruba children - the learning of phrases of respect and the greetings for elders; rhymes, myths, folk tales, proverbs, poems; the names and the order of the days of the week, the seasonal cycles of dryness and rain; the time for planting and the time for harvesting, the progression of sacred festivals; the names and classification of plants, animals, insects; counting, addition, substraction etc.

These and other studies of the content of out-of-school learning cultures serve to remind educators and teachers of the knowledge and skills which children have attained when they enter the formal school system and which continues to develop alongside the development of knowledge and skills in school.

Knowledge Dualism

The history of the content of formal education in many developing countries is one of dualism and separation - a separation of content considered appropriate for learning out-of-school and learning in school. Kay-Shuttleworth's memorandum (1847) to the Colonial Office shaped British educational policy for the African colonies. On the matter of learning content, it advised colonial educators to:

* Inculcate the principles and promote the influences of Christianity
* Accustom the children of these races to habits of self control and moral discipline
* Diffuse a grammatical knowledge of the English language as the most important agent of civilisation
* Communicate such a knowledge of writing and arithmetic and of their application to his wants and duties as may enable a peasant to economise his means, and give the small farmer the power to enter into calculations and agreements
* ..teach the mutual interests of the Mother country and her dependencies, the natural basis of this connection and the domestic and social duties of the coloured races
* ..set forth simply the relation of wages, capital and labour, and the influence of local and general government on personal security, independence, and order...

A curriculum embodying these learning goals was sharply differentiated from what the Kpelle or Yoruba learner was expected to learn at home, in the workplace or in the Poro.

Despite the considerable shifts of policy towards curriculum adaptation, curriculum relevance and education for self reliance, the historical legacy of dual knowledge systems in Africa is still apparent. The history of attempts to provide "relevant" education for children from a variety of cultural backgrounds has been long and tortuous. Many attempts were made by colonial educators to adapt colonial schools to the "needs" of the learner. This involved adaptation of the curriculum to local conditions, involvement of the parents in the running of schools and the redefinition of the role of teacher as a community developer. But the response was not always enthusiastic. Besides technical and support problems the greatest obstacle to the adaptation of one learning culture to another were the learners and their parents. School enrolment and school learning were perceived to be the means of "purchasing a better material future" (Bude 1985), "suffering without bitterness", "arriving" or "falling into things" (Ocaya-Lakidi 1980). An education adapted to the local economic needs of agriculture gave rise to a conflict of interest between the learner and educator.

The need for change in the learning culture of the formal school was called for in 1961 when the African Ministers of Education commented on the gap between the content of African education and the needs of the African child.

> "The content of education in Africa is not in line with either existing African conditions, the postulates of political independence, the dominant features of an essentially technological age, or the imperatives of balanced economic development involving rapid industrialisations, but is based on non African background allowing no room for the African child's intelligence,

> powers of observation and creative imagination to develop freely and help him find his bearings in the world" (Unesco 1961).

Since 1961 considerable progress has been made in the development of curriculum content in Africa and elsewhere, and also in many industrialised countries. Yet much dissatisfaction with the role of the school in promoting development remains.

Despite considerable dissatisfaction with the role of the formal school, parents nonetheless value some aspects of that education. They expect their children to learn in-school knowledge and skills which they cannot or do not learn outside of school. The benefits of literacy and the learning of languages which open up new opportunities are valued. As a Ghanaian parent commented:

> I am blind, I do not know how to read. I am deaf, I do not understand the English language. I accept only twopence for uprooting elephant grass. I get only a little for hard work. If I had been to school I would not have ended up like this. (quoted in Brooke and Oxenham 1984)

The majority of rural Mexican parents interviewed in a study on the benefits of education viewed primary school as being the place where their children learn to read and write.

> Literacy is seen as akin to being "awake" and a defence against the unscrupulous who take advantage of the uneducated. (Brooke 1980 p42)

The formal school curriculum is perceived to have advantages by the majority of parents and students. Children learn content of value in-school and out-of-school. The question is whether learning in-school would be more effective if it interacted constructively with learning content and experience out of

school, if the gap between the base learning culture of the child and the cultural pasture of the school can and should be narrowed? We return to this theme later.

Learning Orientations - the "Why" of Learning?

The understanding of culture is important for its determination of learning content. Answers to the question "what does and what should the learner learn?" are usually (though not always) provided by persons other than the learner. But learning systems designed by others will be effective only to the extent that the learners who participate in this system are motivated to learn, can see some point to their learning and believe that they are making learning gains. How much do we know about the motivation for learning in different cultures? In this section we review recent evidence on the orientation to learning of students in the formal education systems of several countries. We suggest that the original conception of achievement motivation promulgated by movements towards global modernisation in the 1960s was rooted in the individualism of American society, and that alternative concepts of achievement stress its social and affiliative aims and objectives.

Pioneering work on achievement motivation and its contribution to the achieving society was undertaken by David McClelland (McClelland 1976). His work was inspired by Max Weber's **The Protestant Ethic and the Spirit of Capitalism** (1930) which attributed differences in levels of economic productivity between countries to differences in ideology, values, attitudes and

motivations. Central to McClelland's thesis is the role of child-rearing practices. Child-rearing practices which involve parental reward for excellent and competitive achievement behaviour are considered to be important for the creation of the achieving personality. For McClelland this personality is developed in the early years of life and is relatively immune to the effects of schooling. Achievement motivation refers to behaviour for which the individual feels responsible, in which there is some level of challenge and uncertainity, which occurs in reference to a standard of excellence and which can be evaluated in terms of success and failure.

Maehr and Nicholls (1980) have criticised this concept of achievement motivation on two counts. The first is the heavy emphasis placed on early personality development as the critical variable in determining achievement behaviour. They argue that the interactive role of institutional factors - the degree of upward mobility possible in an educational or occupational system for example - is underplayed. A second criticism is the ethnocentric definition of success which stresses individual success, individual responsibility and individual challenge, dimensions which may indeed constitute the predominant construct of success in American society, but which may form a subsidiary element in other societies. The ethnocentric definition of achievement motivation lead Doi (1982) to propose a two-dimensional theory of achievement motivation to account for students' achievement motives in Japan. Exploring the achievement orientations of Japanese and U.S. college students he

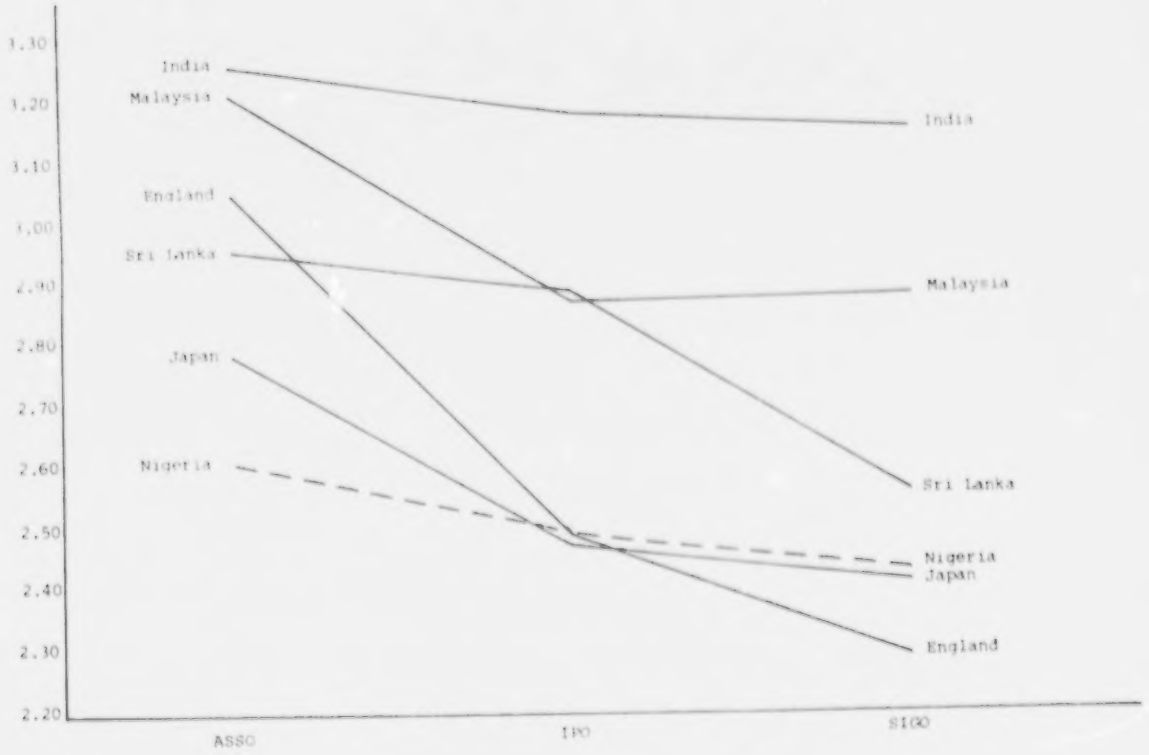
was impressed by the orientation of the Japanese to the fulfillment of social obligations and the definition of achievement as a social act. He went on to suggest that achievement motivation comprised an affiliative and non-affiliative dimension, that affiliative achievement motivation is primary in Japanese society while non-affiliative (non-social) achievement motivation is primary in the United States.

The social and affiliative aspect of success and failure has been emphasised by many researchers working within a multi- rather than mono-society framework. In a six country study of secondary school students' learning orientations three main types of learning orientation were identified cross-nationally (SLOG 1987). These were assessment orientation (e.g. "examination success is what I have aimed for throughout my school learning"), interest orientation ("I do extra reading in the subjects I like") and significant others orientation (e.g. "I work hard to please my parents"). Although derived independently, these three orientations bear a close correspondence to the three types of achievement motivation inferred from the survey of cross-cultural studies by Maehr and Nicholls (1980) - ability oriented motivation where the learning goal is to demonstrate ability, task oriented motivation where the learning goal is to master a task, and social approval oriented motivation, where the goal is social approval from others.

Two sets of cross-national comparisons of data from the SLOG studies are of interest. Figure 1 presents the mean scores of the three learning orientations of fourth year and sixth year

secondary school students from England, India, Japan, Malaysia, Nigeria and Sri Lanka. The figure presents a profile of mean scores for each country, the scores having been standardised for the number of items per scale.

Figure 1. Mean scores of learning orientations for six countries. (Max 4.0; min 1.0)



A simple analysis of these results produces a "league table of nations". India demonstrates the highest mean scores on all three dimensions and Nigeria the lowest. Somewhat surprisingly

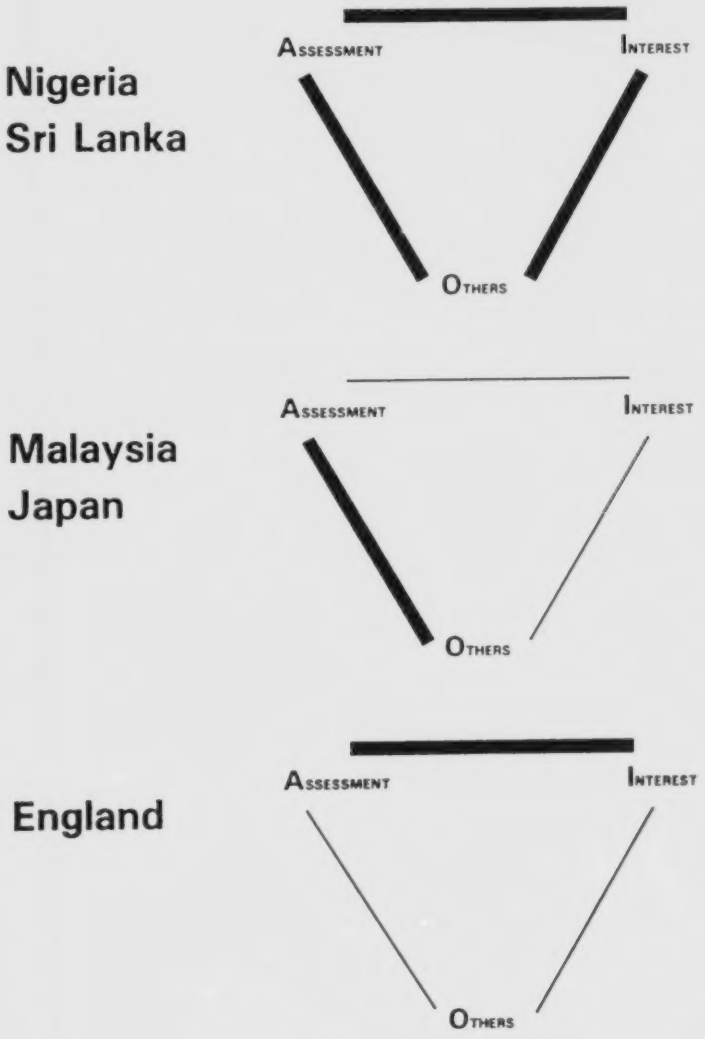
perhaps Japan achieves low mean scores on all three learning orientations. But *such simple cross national comparisons* on single dimensions help us little in appreciating the complexity of motivation from a societal or individual learner's viewpoint.

A more useful analysis of results involves a comparison of profiles of mean scores on a range of dimension. A comparison of the profiles of mean scores presented in Figure 1 points to some similarities but also marked differences between the mean scores of English and Japanese students. In both countries the mean scores on assessment orientation are higher than the mean scores on interest orientation which in turn are higher than the mean scores on significant others orientation. Of greater interest however is the "crossover" in the English and Japanese profiles. Whereas English students seem to express higher levels of assessment orientation than Japanese students, the Japanese students express higher levels of significant others orientation than English students. This contrasted relationship between assessment orientation and significant others orientation is also reflected in the analysis of relations between orientations at the individual student level. Are students who express strong or weak orientations to assessment also likely to express strong or weak orientations to task interest? Are students who express a strong orientation to significant others the same students who express a strong orientation to assessment?

Figure 2 suggests that there is no universal answer to these questions. The Nigerian and Sri Lankan data suggest that

students who express strong orientations to assessment also express strong orientations to interest and significant others. Conversely students who express weak orientations to assessment

Figure 2 Relations between learning orientations in five countries



express weak orientations to interest and significant others. In the English data there was a weaker relationship between the interest orientation and significant others orientation and a

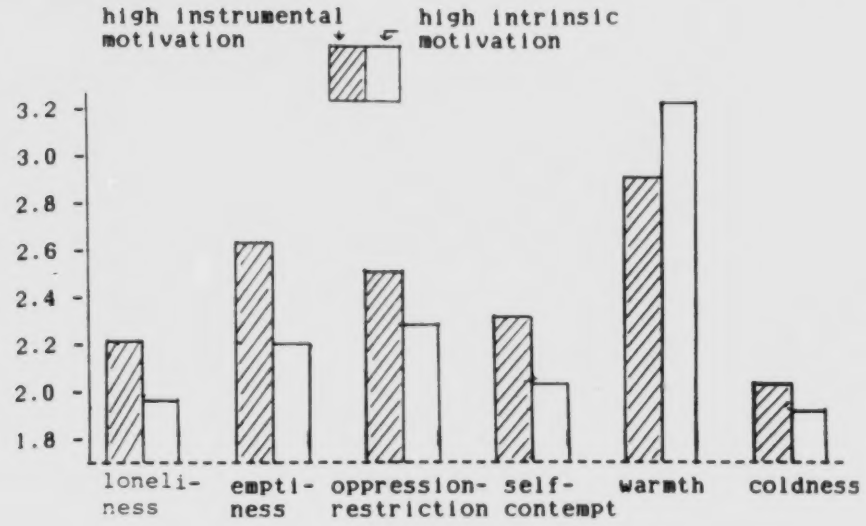
weaker relationship between assessment orientation and significant others orientation. The strongest relationship among English students is between assessment and interest orientation. Students expressing a strong orientation to assessment as a goal of learning also express a strong orientation to task interest as a goal of learning. Conversely, students expressing a weak orientation to assessment express a weak orientation to task interest. The pattern of relations which differentiates itself most from the others is that displayed by Malaysia and Japan.

In Japan and Malaysia there is a very weak relationship between interest orientation and an orientation to both assessment and significant others - but a strong relationship between an orientation to assessment and to significant others. One interpretation of this points to the greater significance of assessment for the fulfillment of social needs among Japanese and Malaysian students than among English, Nigerian and Sri Lankan students. While these data suggest that the pattern of meanings of learning and achievement may be culturally (or nationally) rooted, at least partially, they also draw attention to the range of learning orientations which lie behind learning.

Do these learning orientations bear any relationship with high and low levels of learning achievement outcome and are they important for the short and long term development of the individual? Kashiwagi (1987) examined the relationship in Japan between instrumental and intrinsic learning orientations and alienation and empathy among secondary school students.

Alienation was expressed as feeling lonely, empty, oppressed, restricted, and self contemptuous. Empathy was expressed in terms of warmth and coldness.

Figure 3 Links between learning orientations and personal/social development, Japan



Source SLOG (1987)

Figure 3 presents the mean scores on the four dimensions of alienation and the two dimensions of empathy for two sub samples of students, those expressing high instrumental motivation and those expressing high intrinsic motivation. Results suggest a close relationship between an instrumental (grade) orientation to learning and alienation, and between an intrinsic orientation to learning and the warmth deminsion of empathy.

Such data reinforce the increasing concern among some Japanese educators that the disbenefits of the assessment-oriented system of education in Japan and its associated "examination hell" are beginning to outway the benefits. This Japanese concern may come as a surprise to foreign educators and policy makers who see in the contemporary Japanese system of education a model to be borrowed and adapted to other countries. Reischauer (1977) and Vogel (1979) praise the excellence and superiority of the Japanese system with its detailed national curriculum, tightly regulated course hours, well distributed and superior facilities and equipment, well behaved children, broad access to education and superior achievement on international tests of achievement.

The relationship between learning orientation and longer term development has been examined recently by Little and Singh (mimeo) who explored the proposition drawn from the Diploma Disease thesis (Dore 1976) that high degrees of assessment orientation in school learning cultures inhibit longer-term innovation and creativity among non-manual workers in the culture of the workplace. English and Malaysian data suggested that assessment orientation in school was neither negatively nor positively related to an innovative and creative work strategy. In both countries the relationship was null. What did emerge however was a significant positive relationship in both countries between an expressed interest orientation at school and subsequent creative work strategy. In other words workers who recall feeling motivated to learn at school because they were

interested in what they learned were more likely to report a creative work strategy across a range of non-manual jobs than workers who recall an uninteresting and unchallenging learning environment. To the extent that creativity is valued positively in the workplace (and it is not always so valued) then a key predictor of it may be the degree to which workers were stimulated at school to learn through interesting content combined with an assessment system which encouraged rather than discouraged the enjoyment of learning.

Indigenous definitions and explanations of achievement

Implicit in both the what and the why of learning are definitions of what constitutes education, learning, achievement and ability. Fafunwa (1982) has identified the "seven cardinal goals of traditional African education " as:

> The development of the child's latent physical skills.
>
> The development of character.
>
> The inculcation of respect for elders and those in positions of authority.
>
> The development of intellectual skills.
>
> The acquisition of specific vocational training and the development of a healthy attitude towards honest labour.
>
> The development of a sense of belonging and the encouragement of active participation in family and community affairs.
>
> The understanding, appreciation and promotion of the cultural heritage of the community at large.

This list overlaps with many one finds in the initial pages of

contemporary national education policy documents. The differences are mainly those of emphasis. The national policy on formal schooling might accord a lesser priority to the inculcation of respect for elders, and a greater priority to the understanding, appreciation and promotion of the cultural heritage at a national level. The development of intellectual skills might be disaggregated into literacy, numeracy and scientific technological literacy.

Callaway (1975) explains how the Yoruba (Nigerian) concept of **eko** bears the closest equivalence to the English word education. **Eko** includes knowledge of religion and oral literature, skill training in agriculture and crafts, the building of physical strength and agility, and the formation of character and development of wisdom (Fajana 1966). Noting the difficulties inherent in making cross cultural comparisons Callaway suggests that **eko** placed a greater emphasis on discipline and a lesser emphasis on the "permissiveness" characteristic of British or American homes and schools. Noting the almost universal connotations of the ideal child or ideal adult, (respect for others, commonsense, integrity, moral courage, individual responsibility), she notes an additional Yoruba connotation - the sustenance of "correct relations" through the visible and invisible orders of experience (religious, political, economic and social). The successful application of rules in these four arenas of experience marks the achievement of wisdom, or **ogbon**.

Yoloye (1983) examines the role of education in the development

of **ogbon** and the relationship of **ogbon** to personality development. He suggests that human personality as traditionally perceived by the Yoruba, comprises ogbon and three other essential components - **ori** (essence of personality), **iwe** (enduring patterns of behaviour), and **ise** (skills, especially occupational skills). The role of indigenous education was the development of **ogbon** and **ise**. The development of **ogbon** in turn, influenced the development of **iwa**, the enduring patterns of behaviour, though much of **iwa** is determined by **ori**.

One of the most striking differences between the in-school and out-of-school learning cultures is the way in which "intelligence" is defined and the extent to which it is thought to be a consequence rather than an antecedent of learning. In many cultures the closest translation of the English term "intelligence" is "wisdom", acquired through effort, religion and merit. The competencies which constitute the intelligence necessary for effective functioning in everyday out-of-school life are often not the same competencies which constitute the intelligence required for success in school learning (Goodnow 1980). Church and Katigbak (1988) explored how rural Philippino adults understood the concept of intelligent behaviour of children in the context of everyday functioning. They compared the behavioural components of these everyday definitions with the external definitions implicit in an imported intelligence test, and examined the implications of performance on both sets of dimension for subsequent school performance. The everyday definition comprised skills and responsibilities such as

independent functioning, domestic chores, outdoor chores, initiative/perseverence, mannerly behaviour and verbal/intellectual skills. The imposed definition comprised picture identification, erroneous pictures, concept formation, picture construction, vocabulary, local information and comprehension and block design. They examined the relationship between pre-school and year 1 primary children's performance on everyday and external measures of intelligence and their school performance. The skills and responsibilities component of the everyday definition bore little or no relationship to school performance. However the intellectual component did predict school performance in the first and second grade and the verbal component predicted first grade school performance. The imposed measures were predictive of grade 1 performance though were no better at predicting grade 2 performance. Only the picture construction test predicted school performance in year 3. The authors draw several conclusions from their study. The imported intelligence tests measure a construct of intelligence which overlaps only partially with concepts held by rural Philippinos, the overlap being between the verbal/intellectual skills which resemble problem-solving and verbal facility. However the everday concept is not purely cognitive and emcompasses skills and social/motivational components not well covered by more context-free intelligence tests. These everday, practical, real world or contextualised dimensions of intelligence are no better than imposed definitions for the prediction of school performance.

The contradictions between imported definitions of intelligent functioning and everyday definitions finds a parallel in teachers definitions of the ideal school learner and those of educators who use imported standards and ideals. Ohuche identified differences between Nigerian teachers' definitions of the ideal school learner and the definitions of educators (unspecified) who feel that schools "should be making concerted efforts to foster and encourage creativity in its citizens in order to enable the country to find suitable solutions to its problems" (Ohuche 1986 p.191). Nigerian teachers identified the characteristics desired of the ideal pupil. The nine most commonly identified were industrious, sincere, obedient, considerate of others, self-confident, healthy, courteous, desire to excel and affectionate. This conception of the ideal pupil was out of line with the Western model of the creative personality defined through an analysis of the opinions of an expert group and described by Torrance (1965). These "experts" identified the following behaviour as necessary correlates of creativity - courageous in conviction, independence of judgment, independence of thinking, curiosity, intuition, willing to take risks, visionary, preoccupation with tasks, unwilling to accept "say so".

All three examples encourage us to explore further the contexts in which the outcomes of effective learning are realised. When we discuss "effective learning for all" do we need to anticipate the contexts in which such learning will be utilised? The skills required for survival in school, survival in a large bureaucratised work organisation, survival in the barrio or

survival in the fields may overlap, but they will also differ from each other in significant ways.

Learning Strategies - the How of Learning

Fafunwa (1982) emphasises the role of learning-by-doing in old African society. Children and adolescents engaged in participatory education through ceremonies, rituals, imitation, recitation and demonstration" (Fafunwa 1982 p.10). Other learning strategies employed included poetry, riddles, proverbs, story telling, story relays, physical training and character building exercises. Fajana (1966) describes how in Yoruba educational theory, two methods of learning are specified. The first, **awoko**, is the imitation of older youth and adults by the learner. The second, **ifiye**, is active instruction given by adults. As Callaway (1975) explains, **ifiye** is associated with evening family compound gatherings, during which children are asked to repeat a story from the previous evening as a test of both memory and of narrative expressiveness. As well as improving verbal dexterity **ifiye** introduced students to the oral culture of the immediate and broader society through proverbs, poems, local history, folk tales and myths.

In Mexico the Museum of Anthropology contains records of fourteenth century Aztec culture. The Codex Mendoza presents a fascinating picture of how Aztec sons and daughters learn from their fathers and mothers respectively, through observation, demonstration and practice. The Codex presents the learning curriculum by age group. At six years old boys are taught to forage and do errands in the market place while girls learn to

spin. At seven years boys learn to fish while girls education is confined to domestic tasks. The learning strategies included techniques of reward and punishment - the cactus spike treatment for nine year old boys for delinquent behaviour was replaced for ten year olds by beating. Training in family groups continues to characterise education among the descendents of the Aztec culture. After attending school in the morning boys may learn the craft of furniture making from their fathers, taking their place from an early age as important members of the family economic group. Examples abound in every country. In Sri Lanka the sons of fishermen learn the crafts of boat repair and net mending after school hours. After returning from school in the afternoon primary school-age girls join in a work group with female relatives. In those villages which engage in coir rope production the young girl learns about the different stages of production through her participation in the work group (Little and Dore 1982).

Recent studies of learning, drawing on both psychology and anthropology, have contributed to the improved understanding of the ways in which culture and learning intesect. By focussing on the learning activity, task or event, the individuals learning behaviour is described in relation to specific goals, constraints, values and other people. The social interaction between learner and adult and the guiding (conscious or otherwise) of the learning by the adult is an essential element in concept acquisition, acculturation and education (Cole 1985).

The following example of out of school learning drawn from an American Indian community in the south of Colombia describes the process of learning experienced by a twelve year old girl as she milks cows with her mother (Laserna 1989). The activity of milking can be described on three levels - script, actions and operations. **Script** refers to a set of expectations and knowledge about common situations, a cultural routine. In the case of the Indian peasant village of San Juan milking is an everyday activity, performed routinely by women who also produce and sell cheese and control the money from the sale. Most milkers take a child to the fields to help them manage the cows and to help transport containers to and from the field. Three phases of **action** are described, each comprising sequential steps (e.g. driving the cow, driving the calf, tying the cow's hind legs, letting the calf suckle until milk is "let down"). **Operations** refer to the ways of executing the steps. These include the technique of milking which, as learning proceeds, generalises across different cows. At the level of operations and their development we are encouraged to observe the following: Who carries out the step (novice or expert?) Does the novice require expert regulation? What kind of regulation is used (verbal/non-verbal, direct/indirect)? What kind of constraints are implicit in the task or are made explicit by either the novice or expert?

The observation protocol presented below illustrates the application of the concepts of action and operation to the activity of milking. The action steps are underlined.

The Setting: About a 20 minute walk from the village,

on a mountain slope.

The Participants: Mother and daughter - Flor Maria (a 36 year old illiterate woman), and Zora (a 12 year old third grader). Zora has decided that she wants to do animal husbandry when she finishes school, and she accompanies her mother whenever there is no school.

Motive for the activity: Flor wants to milk the cows and Zora comes to help with the animals and perhaps try to milk them herself.

Tools: The milker has a small stool to sit on. She also has a medium-size container into which she milks. There is a bigger container where all of the milk is collected.

Cow 1. The first cow and calf come into the field. Flor ties the cow's legs. Zora catches the calf with a rope. She lets the calf approach the cow and Flor guides it to suckle a few times on each of the teats so that the cow lets the milk down. (Flor explains to the observer that the calf's suckling makes the cow release the milk.) After two minutes, the calf's mouth is full of milk and Zora pulls it back and ties it to the fence near its mother. The mother sets the container on the ground and starts to milk. "Should I hold it?" asks Zora. Her mother nods and Zora holds the container while the mother milks. (Explicit rule: Flor explains that this is the cow's first calf and therefore it is hard to milk her. Also, it has a black udder and such

cows are known to be difficult to milk.)

The technique of milking is to squeeze the teats in the hand, pulling only slightly. The milking stool has no back support; thus the milker needs to learn to sit up straight to avoid getting tired. This posture is learned mostly by observation and imitation - this posture was never observed being trained explicitly. Explicit constraint: Flor explains that when the teats are small, as in this cow, it is difficult to hold them and the hands tire easily. Once Flor has finished, she pours the milk into the bigger container.

Abstracted from Laserna (1989)

Laserna's synthesis (1989 p.184-186) of this and subsequent milking activity suggested that the individual mastery of the craft of milking is a gradual process, in which the expert organises the novices participation in the milking routine in two ways. The novice is assigned responsibilities at which she is already expert (e.g. driving the cow and calf, tying the calf). The expert then "scaffolds" (supports) the development of skills by choosing an easy animal and encouraging the learner to rest between tasks. The division of roles in this joint activity rewards both. The novice learns a skill; the expert enjoys assistance in her work. The animals themselves provide certain constraints on the learning and teaching process. If the cow recognises the "smell" of the milker she will let herself be milked without kicking; if not both the expert and novice will make errors. When the expert wants the novice to practice the

expert must prepare the ground. She must relax the cows so that the milk will flow for the novice, and if the novice rests between her attempts at milking the expert must continue to milk the cow to avoid the stemming of the flow of milk. The novice uses language to seek information or to seek approval for an action. The learning process leads eventually to mastery of the entire milking routine, a mastery which is expected eventually of every learner.

This particular learning activity was characterised by an error-free performance on the part of the learner which can be attributed in part at least to the cultural context in which milking activity is located. The economic value of the milk to members of this particular Indian peasant community meant that the learning activity was structured to ensure error-free performance on the part of the learner.

Error-free learning was also observed by Childs and Greenfield (1980) in their study of young Zinacantan women learning to weave in Mexico. Young Zinacantan women learn to weave through an apprenticeship system. Before entering this system however, they will have spent many years observing adults weaving and will have developed a considerable amount of "pre-knowledge" before engaging in the practical task themselves. In the early stages the intervention of the expert is intense, the teacher anticipating difficulties and errors before they arise. However the learning is error-free and the quality of the woven garment very high. The expert supervision of the first garment is

intense, about 90% of the time, reducing to around 40% by the fourth garment. Childs and Greenfield compare this error free learning with first language learning in which there is a considerable amount of trial and error learning which eventually becomes successful learning. The comparison of weaving with language learning involves many dimensions other than the tolerance of error. Apart from the age of the learner, which makes certain types of adult intervention more possible than others the economic value of errors is important. Weaving mistakes among young adults can be expensive, language learning mistakes among young children considerably less so.

In the Mexican example cited above the patterns learned were traditional and the learning was oriented towards the reproduction of them. In a later study, Greenfield & Lave (1982) identified error-tolerant strategies for the teaching and learning of weaving. Among the Ibo in Nigeria and the Mayans in Guatamala, where pattern innovation is highly prized and has economic value, learning to weave employed trial and error learning methods to a much greater extent than was found among the Zinacantan.

In all the examples presented thus far - verbal dexterity among the Yoruba of Nigeria, the craft of furniture making in Mexico, coir rope production in Sri Lanka, pattern weaving in Mexico, Guetamala and Liberia, and milking in Colombia - the learning and teaching strategies have been mediated through the mother tongue. The most widely discussed issue of teaching and learning strategy in formal school learning is the use of mother tongue versus non-

mother tongue as the medium for instruction. Since language and learning is the subject of a separate paper available at the WCEFA round table only a few comments will be made here. The 1953 Unesco recommendation that the mother-tongue be used as the medium of instruction for reading and writing in the earliest year of school is widely followed. Of issue is the choice of optimal learning strategy for the acquisition of a second language, whether through the native-language bilingual approach or direct-method (von Gleich 1987). The impact of language on learning is much broader than its impact on the learning levels achieved in particular school subjects. Language conveys culture, conditions the range of concepts available to the learner, and reinforces implicitly the social and political value attached to different types of culture. School learning cultures in which the use of the mother tongue by the learner is punished devalue not only the tongue but also much of the political, social and economic culture it conveys (Wunungmurra 1988). The medium of instruction also opens up to some and denies to others opportunities in the wider world. Mazaba & Nthepe (1979) illustrate this particular dilemma with reference to Tanzania. They claim that while official government policy emphasises the role of Swahili in the development of a national cultural identity those who formulate the policy of mother tongue teaching enrol their children in private schools "where the teaching is in French or English, for example, and not in the local language" (Mazaba & Nthepe 1979 p.168).

The outcomes of learning

So far we have compared and contrasted learning cultures in terms of **what** learners are expected to learn, **why** learners learn, and **how** they learn. In this section we examine **whether** they have learned. How effective has their learning been? The answer to this question is of interest not only to the learner, teacher, parent, school administrator, government policy maker and politician - but increasingly it appears to be of interest to the aid agency or lending bank official. In the following extract, an eleven year old girl from an English state primary school recounts to this author a conversation with her mother about her younger sister's performance in reading.

> (girl) This morning Mummy said "Was Julie up to a good standard on her reading book?" I didn't really know but I know its her twelfth book and she's only been there six months. I think its quite good but I didn't think it was over average and Mummy didn't know if she was down low in the class....because if she was behind she would try and help her at home.
>
> (author) Why do you say she's probably about average?
>
> (girl) Well most of the other children started at Christmas and are on more or less on the same book.
>
> (author) How do you know that?
>
> (girl) Well if its a wet playtime I go down to the classroom next to hers and the children in there are the same age and they get their reading book out and tell you what book they are on and that they are on more or less the same book.
>
> (author) How many reading books do they have down there?
>
> (girl) Quite a lot because they have the ones that the small children start on and then ones that go up to about second year in the juniors. They've got little blue books that they first read and Janet and John books and Ladybird books, then they've got some colour books, red, indigo, yellow and green and they've got Another Story and Here We Go and

things like that.

The girls' knowledge of the differently graded reading books which her young sister was to read was detailed and accurate. She also held a shrewd idea of where her sister and classmates stood in relation to each other and to the reading materials hierarchy. Achievement of learning to read was defined in terms of which reading book you were on. Her definition of reading standard was not so different from her teachers, though a teacher if pressed would no doubt provide a rather more detailed definition which included an assessment of reading accuracy, reading expression and reading comprehension.

Definitions of learning outcomes in school vary from the specific to the general. Pupil learners employ a variety of cues when comparing their own learning achievement with that of others. A ten year old boy in an English Primary school expressed the learning performance of two of his classmates, John and Andrew:

> Well John and Andrew nearly do the same but John can draw better than Andrew. He's much better. He's best at drawing and everything and Andrew can write in biro and John can't cos Andrew don't make any mistakes and that.

Teachers derive many of their definitions of learning outcomes from the learning and assessment materials they use. If the assessment materials lead to "results" which have value beyond the confines of the classroom, the definitions of learning outcome gradually come to be expressed in quantifiable terms. If these "results" have an economic or social value in terms of future access to education, income, occupation, status, and

prestige, then the results and scores rather than the behavioural skills they represent become the key element in the definition of learning outcome and effective learning. Parents become preoccupied with whether their child has achieved a grade A, a distinction, how many "passes", how many "fails". Teachers become preoccupied with the number and percentage of their students who have passed, failed, or achieved distinctions. Regional education officers are interested in the aggregation of scores across all schools in their region compared with the national average results and the results of other regions. National level officials become interested in whether national standards are rising or falling and compare numbers of passes and numbers of distinctions over time. If a sample of students in a nation has sat a test which claims to be capable of comparing standards between nations then the mean scores on these tests and the nation's position in the league table are of interest, and the data used to achieve a number of (often political) ends.

Achievement test scores require a considerable degree of interpretation if they are to be used as an indication of whether learning has taken place, whether learning skills have been mastered. Achievement test results should not be treated in isolation from the learning curriciulum they purport to measure. If the learning of science means the development of the skills of observation, classification, experiment and generalisation, and if the tests which assess whether learning has taken place test only the skill of memorisation, then the assessment of effective learning is obscured and the meanings which learners attach to

future learning distorted. If learning comes to be defined as "passing tests", and if tests fail to measure curriculum objectives, then learning how to pass a test will take precedence over learning how to perform the skills prescribed by the curriculum objectives. The assessment systems which accompany the provision of education through formal schooling are for the most part "norm referenced" rather than "criterion referenced". Norm referenced assessment helps one answer the question "how much have I learned relative to another person?". Criterion referenced assessment helps one answer the question "what skills have I learned?". Learning to weave, learning to mend nets, learning to milk a cow and learning to solve riddles in out-of-school learning cultures are generally assessed through criterion referencing. There are certain skills to be learned in a certain sequence, and mastery of one set of skills is required before moving on to the next. Whether other children are learning at the same rate is immaterial, since allocation to future roles is not dependent on one's performance relative to others at a single point in time, measured by a test and publically acknowledged through a grade on an educational certificate. Rather it is accepted as 'normal' that all children will master a skill eventually, even if it takes some a little longer than others. The demands placed on the formal school to simultaneously educate **and select** children for future education and occupations means that the definition of learning effectiveness changes from "what am I currently able to do?" to "have I succeeded or failed in relation to other students?".

Answers to the first question reinforce mastery **learning for all**, the second mastery **learning for only some.** Part of the argument about the benefits of repetition and automatic promotion reflects this dilemma between effective mastery learning for all and effective mastery for some. Automatic promotion is often encouraged by educational systems. But one frequently meets school teachers, who, despite their national government's "policy" on automatic promotion, encourage some students to repeat. Their argument is based, at least in part, on a philosophy of "learning effectiveness for all". If a learner in year 1 primary has attained an insufficient level of mastery of basic skills to enable him or her to cope with the learning materials presented in year 2 then what is the point of promoting the child to the next class and reducing the chances of further effective learning? Failure to master basic skills has a cumulative effect.

Explaining the outcomes of learning

The dominant definitions of the outcomes of learning in terms of relative success and failure on a learning test have led social scientists to seek explanations for why some children, schools, regions and countries perform at a higher level than others. The list of "explanatory factors" identified is long (see Lockheed and Verspoor (1989) for a recent review of literature). These questions have attracted the attention of almost every type of social scientist - the psychologist, anthropologist, sociologist, socio-linguist, political scientist and economist. Among the many "causes" or "factors" cited are social class and home

background, native intelligence, teacher expectations, the need for achievement, staff/student ratios, the availability of teaching materials, "restricted" and "elaborated" language codes, time on task etc.

But almost all attempts by social scientists to explain high and low achievement have one thing in common. They fail to include in their explanations of success and failure explanations held by the individuals they study - the learners. This is an important omission because, in the case of learning achievement and the effectiveness of learning for future achievement, the learners own explanation of achievement may itself be an important determinant of later learning. Definitions and explanations of success and failure are implicit in all cultures and serve to reproduce those cultures. Learning cultures are no exception.

Over the past fifteen years a series of studies on the individual's perception of the causes of success and failure have emerged from "attribution theory". The roots of the theory can be traced to the work of Heider (1958) who proposed that an adequate understanding of human social behaviour rests on a description of how human beings perceive and report their social world. One of his premises was that because people desire to predict and control their social environment they perceive behaviour as "caused". Weiner (1979, 1985) has applied and developed the theory with respect to achievement behaviour and achievement motivation. In constrast to earlier work on achievement motivation which focussed on the environmental conditions and reward structures encouraging achievement

behaviour in young children, attribution theory is concerned more with the cognitions or understanding of the actor, the conditions under which certain types of attribution are made and the consequences of these attributions for future behaviour. The most commonly identified attributions for learning achievement events (e.g. performance on a school test) have been effort, ability, luck and task difficulty. These and other attributions have been classified along the dimensions of stability (is the attribute constant or variable?), locus (is the attribution internal or external?) and controllability (can I control the outcome or does it lie outside of my control?). The attributions made by a student have been demonstrated consistently to have implications for future behaviour in two respects, (i) expectancy of success and failure in the future and (ii) pride and positive self-esteem. Achievement outcomes attributed to stable attributions lead to confidence about the likelihood of future outcomes. Conversely, achievement outcomes attributed to unstable attributions lead to less certain predictions about the likely outcome in the future. If learning success is attributed to ability and if ability is perceived to be stable then future success will be predicted by the individual learner. Conversely, if learning failure is attributed to an unstable cause (e.g. ability) there will be a high degree of expected failure in the future. Unstable attributions (e.g. effort) tend to lead to less certain expectations about future success and failure. The locus dimension (internal versus external) has been linked with pride and self-esteem. Pride and positive self-esteem are experienced

as a consequence of the attribution of learning success to the self. But lack of pride and negative self-esteem follow an attribution of learning failure to the self.

The majority of studies conducted within the attribution framework have involved adult learners in formal education institutions in the USA and other industrialised countries. A small but growing number of studies are emerging from younger learners and those in developing countries. We know that the theoretical classification of attributions along the dimensions of locus, stability and controllability has enjoyed cross cultural validation from empirical studies among adults in Belgium, West Germany, England and South Korea. However the universality of the theoretical matrix has been challenged by data from Indian respondents who rated all attributions as more external, variable and uncontrollable than did adults from the other four countries (Schuster, Forsterlung & Weiner 1989). We know that Sri Lankan and English school children use common and different attributions to explain learning success and failure in school, and that the propensity to use different types of attribution increases with age (Little 1987). But to date there are few systematic studies from a variety of in-school and out-of-school learning cultures from developing countries which examine the situational antecedents of attributions, the psycho-cultural dimensions which are used to classify attributions, and the short and long term behavioural implications of these dimensions.

We saw earlier how the cultural patterns of the perceived goals of learning varied, how social goals were more loosely connected

with assessment goals and how assessment goals were more closely related to social goals in Japan, Malaysia, India, Sri Lanka and Nigeria than they were in England. White Australians who work with Aboriginal children and teachers stress the importance for Aboriginal learners of learning activities oriented towards group unity and harmony and the lesser importance, even dislike, of learning tasks set by teachers oriented towards personal learning and development and individual competition.

> One of the ways in which white education invades the unity of an Aboriginal group is by setting up systems which reward individuals on the basis of their behaviour or their achievement. For Aboriginal children being happily part of a united group is the only reward they have learned to look for, and the only reward they want. They were outraged by white teachers' presumptions that they can reward and punish their students on the basis of what they see as their good and bad performance which even the youngest aboriginal children can feel how the messages which white educators convey break down the old system of reward based on unity, and replace them with reward contingent on merit and achievement." (Christie 1988 p. 5)

The focus of attribution theory on the **individual** outcomes of learning may need to be extended to include a consideration of attributions made for learning outcomes when learning is oriented towards a group rather than an individual outcome.

The belief in effort and motivation: an overlooked cultural success story?

It was suggested earlier that culture is invoked frequently as an explanation for failure, and only rarely for success. One success story which may have escaped the notice of many is the link between the phenomenal expansion of education systems over the last twenty years and cultural beliefs in the efficacy of effort and motivation as a determinant of success in the formal

education system. Parents have encouraged their children to attend formal schools in the belief that the school offers a way out of poverty and that success is attainable by all who persevere, are motivated and invest effort. In a study of the quality of education in rural Ghana, Boakye & Oxenham (1982) report that over sixty per cent of parents interviewed (n=127) chose "working hard" as the "most important determinant for good marks" compared with fifteen per cent who chose "being bright naturally". The proportion of parents who believed that working hard was the best explanation for good marks was related inversely to the economic level of the community. The poorer the community, the greater the parental belief that effort explained success. The belief in the efficacy of effort was echoed by their middle-school children. Seventy seven per cent of these fifteen year olds claimed that hard work was the main ingredient of academic success while only thirteen per cent attributed success to "natural gifts". In a parallel study in Mexico, eighty four parents of rural primary school children were asked what were the most important factors in helping their children to learn well and earn good marks (Brooke and Oxenham 1980). Forty per cent felt that the main factor was studying hard and motivation; twenty per cent felt that the main factor was having good teachers; nineteen per cent, help from parents; thirteen per cent the intelligence of the child; and seven per cent the child's ability to get on well with teachers. The main attribution for failure was similar. Sixty nine per cent attributed school failure to lack of effort and study; seventeen

per cent to the child's "lack of capacity"; eleven per cent to poor teaching; and three per cent to lack of parental support. In a related study conducted by this author urban and rural parents (n= 140; 40) in Sri Lanka were asked whether they knew a child who had failed the GCE 'O' level examination and whether they knew a child who had passed and, if so, what did they think was the main reason why one child had passed and the other failed? The largest single explanation for the different performance was the effort and interest of the student. Fifty three per cent of the urban parents' responses and forty per cent of the rural parents' responses were of this kind. Other explanations were environmental in nature. These included factors outside the personal control of the child (for example economic condition, parental interest and changes in the education system). These accounted in total for another thirty and thirty four per cent of the urban and rural parents respectively. Only two per cent of the urban parents and four per cent of the rural parents attributed the difference to intelligence (buddhia), an attribution that was as frequent as "good fortune" (waasenaawan). Among the children too effort and interest were very frequent explanations of success and failure. Thirty five fourteen year old students in an academically "average" high school in Colombo were interviewed about school success and failure. All but one explained success and failure in terms of personal effort. A parallel study among English school children produced a similar result but one significant difference which emerged was in the use of the attribution "motivation" as an explanation of success and failure. Responses

from children across the basic education cycles in both countries (ages 5 - 14) showed that Sri Lankan children were more likely than English children to use motivation as an explanation for success. Responses were of the kind "she is doing good work because she wants to pass the exam", "he got more marks in the maths test because he wants to get a good job". Whether this stress on effort and motivation can be traced to long established Buddhist beliefs and cultural practices, or whether the beliefs emerge from the contemporary economic context of formal education in Sri Lanka is difficult to establish. From the point of view of the base learning culture of the child, however the distinction is probably immaterial. Whatever its long-term social and historical antecedents the belief is part of the culture within which the child learns, and determines his or her current and future learning strategies and behaviour.

Contrasting Cultural Learning Pastures

We have identified how the knowledge orientations and strategies of learning cultures vary. We have identified some of the characteristics of the learning culture of the formal school and some differences between formal school cultures in different societies. We have highlighted differences between "traditional" learning systems and contemporary learning systems - differences in content, orientations and strategies of learning. We have contrasted contemporary out-of-school learning cultures with some aspects of those in school. Some children learn only in the

Figure 4 Comparison between Traditional Black African Education and Western-Style Primary School Education

Aspects of the curriculum	Traditional Black African education	Western-Style primary school education
(1) didactic approach	ad-hoc treatment of learning situations	formalized, continuous learning
(2) learning field	environment, work community	school, environment
(3) emphasis of learning	local	national
(4) orientation of learning	local, collectivist, conformist - survival skills ("survival kit")	urban, individualistic conformist - examination skills (actual knowledge)
(5) learning contents	orally transferred knowledge and experience reproduction of traditional knowledge and skills ("status quo" curriculum)	reading, writing, arithmetic basic knowledge to understand natural science/technological contexts
(6) form of instruction	unstructured, integrative, learner-focussed, unity of life and learning	structured, delineation of subjects, teacher focussed, distinction between life and learning
(7) learning methods	observation, participation, imitation, games, instruction (particularly for special skills)	instruction, lecturing by teacher, games
(8) teacher	flexible; parents, family members specialists - seniority principle	fixed; specialized teachers - qualification principle
(9) body responsible for instruction	community, cultural group	state
(10) responsibility for instructional design and procedure	parents, community	state, teacher, parents (formal right (of co-determination)

Source Bude (1985)

out of school culture, some learn daily in several - the home, the school, the workshop or field. Some writers have sought to differentiate the cultural pastures encountered by the learner in a systematic way. Bude (1985), building on the work of several African writers, has produced a set of comparisons between "traditional black African education" and Western style primary school education. (Figure 4)

The term "traditional " deserves comment. Much "traditional education" is contemporary. Out-of-school learning in the home, workplace, and the temple consumes a large part of the waking day for many children, even those who are full time enrolled in formal schools, and much of the detail of what is called "traditional" has changed over time. Acknowledging that the aims of education for the Yoruba of Nigeria remain as important today as ever, Yoloye (1983) suggests that the skills and wisdom of Ogbon and Ise of fifty or a hundred years ago, which enabled individuals to adjust to rural illiterate communities, are different from those necessary to survive in a large, contemporary Nigerian city. And while the contrasts presented above represent two "ideal types" of cultural pasture, there are, in reality, considerable variations within each.

Alternative Cultural Pastures: Contradictory or Complementory Forces for Learning and Development?

The types presented above in Figure 4 represent contrasting cultural pastures for learning. Contrast implies difference and separation. But can there also be constructive interaction

between contrasting cultural pastures? Can content from one cultural pasture be borrowed and built on by another? Can orientations and learning and teaching strategies be similarly borrowed? Does the borrowing of elements of the pasture need to be wholesale or can it be selective?

In this section four examples of selective integration of elements from different cultural pastures are identified, representing different aspects of the process of educational borrowing and lending between learning cultures. The first example, Suzuki-method violin teaching in the United States of America illustrates how a learning strategy, borrowed from traditional and contemporary Japan has been adapted to the educational values and practices of contemporary American society. The second, the emergence of "two-way" schooling among Aborigines in Australia, illustrates how "lending" of learning content, strategies and orientations on the "colonisers terms" led to rejection, and the eventual emergence of a contemporary philosophy and model for Australian Aboriginal education created collaboratively by white and Aboriginal educators. The third, bi-cultural and bi-lingual programmes for education in Latin America, involves a deliberate integration of the learning content of out-of-school learning cultures with the content of formal school learning. The fourth example illustrates the borrowing of a "traditional" communication strategy for the transmission of "modern" knowledge in a non-formal learning culture.

Inter-national borrowing and adaptation of learning cultures

The first example illustrates how the Japanese Suzuki method for teaching the playing of the violin has been adopted or borrowed by music teachers in the United States of America and has, in the process of adoption, been adapted to provide continuity with American educational values and practices. Shinichi Suzuki, a German trained Japanese violinist, argued that if children could become fluent speakers of their native language by the age of five years then the methods used for language learning might also be applied to the learning of other skills. This "mother tongue" approach embodied five principles - the structuring of the home environment to ensure constant contact of the learner with the medium to be learned, simple initial tasks based on imitation and repetition, daily practice, the encouragement of interest through mother child interaction, and the reward of increased competence with praise and affection. The contemporary Japanese technique represents the grafting of the teaching of a non Japanese instrument, the violin, on to traditional Japanese music teaching techniques. When the method was borrowed by and transplanted to the United States a number of adaptations were made. In America lessons tend to start one or two years later (4-5 years of age), the mother is less involved in the teaching and learning process, more emphasis is placed on individual than group practice and more emphasis is placed on creativity than imitation. Adaptation of the technique has made it easier for the American child to learn. Taniuchi (1986) traces these adaptations to differences between Japanese and American culture

in beliefs about the role of the environment in the structuring of the child's motivation (less important in the U.S.), the role of effort and practice in the development of a talent (less important in U.S.), the role of the group as an effective stimulus for learning (less important in U.S.), the belief in the role of heredity in the development of talent (more important in U.S.), and the belief in the role of individual personality in the development of motivation and interests (more important in U.S.). While some aspects of the technique have been modified some have been "lost" altogether. Commenting on the effect of patient practice, on "spiritual transcendence" and character building, Taniuchi notes how "the Suzuki method has so completely lost its original spiritual aspects and character moulding techniques that few American teachers or parents are even aware of its existence" (Taniuchi 1986 p.135).

Intra-national lending: rejection and regeneration of learning cultures

The Aboriginal learning culture in Australia has developed over time through a series of transactions with other learning cultures. From a position of self sustenance and isolation, Aborigines were "lent" a foreign, English medium education controlled by white Australians "entirely on the colonisers terms" (Teasdale & Teasdale 1986)*. The lending was so complete that there was little room for adaptation to take place. In a sensitive paper titled "The invasion of aboriginal education" Christie reflects on the stumbling blocks to effective aboriginal formal education, arguing that the principal block is the "the

* See also Teasdale's article entitled "Interactions Between 'Traditional' and 'Western' Systems of Learning: The Australian Experience" which appears in the appendix to this study.

refusal or inability of whites to listen, think about or act upon the demands aboriginal people are making for their formal education" (Christie 1988 p.1). Eventually much of the imposed learning culture was rejected and what is now emerging, amid a lively and constructive interaction between representatives of alternative learning cultures, is a recreated aboriginal education system and the development of a philosophy of "two-way education". Harris poses the dilemma faced by aboriginal parents, most of whom

> "have a deep desire for their children to 'grow up aboriginal'; they also want their children to succeed in western schooling and to perform successfully in some aspects of white culture, thereby reducing dependency on white expertise in their communities" (Harris 1988)

He argues that the voluntary separation of learning domains advocated in two way schooling represents a particular form of bi cultural education. Aboriginal children would learn within both domains within the same school but the domains would be separated (e.g. Anglo social studies and Aboriginal social studies with the teaching of mathematics through English). The practical realisation of the curriculum and organisational implications of "two-way schooling" is emerging slowly. Aboriginal parent control apppears to be a central feature of the development of two-way schooling, control which influences staff recruitment, the range and type of learning experience offered, the school year and timetabling. Aboriginal educators are calling for the need to create and apply a model of curriculum development for a "negotiated curriculum" between Yolngu (Aboriginal) and Balanda (European) culture (Wunungmurra 1988). There are practical

implications too for Aboriginal teacher education which needs to be adapted to support Aboriginal teachers in their efforts to investigate Aboriginal domains of knowledge and the learning and teaching strategies which promote effective learning (e.g. Furler & Scott (1988).

Intra-national, inter-cultural borrowing: active integration

The concept of "two-way schooling" overlaps with the concept of bi-lingual/inter-cultural education the practical implementation of which has been developing for some time in a number of Spanish-speaking countries in Latin America. In these programmes two languages are used for learning and teaching, and the curriculum is designed to take account of the base learning culture and mother tongue of the young child and the culture and language of the surrounding Spanish society (Von Gleich 1987). In the Puno project in Peru, bilingual and bi-cultural concerns have guided the development of new curriculum materials in Quechua, Aymora and Spanish over the past ten years. The development of materials in Quechua involved a sociolinguistic survey of the Quechua region of the department of Puno to select relevant pilot schools and to assess the linguistic competence of Quechua-speaking preschool children, in preparation for the development of teaching material in the mother tongue. The first and second languages are used in the curriculum in a systematic though complex way. (Von Gleich 1987 p. 263). Considerable emphasis is placed on the learning of literacy and numeracy through building on familiar content and skills.

Figure 5 is an illustration from Quechua reading book for year 2 primary learners. The children learn to read a story in Quechua about how children manage and keep count of large herds of sheep. The counting system with which all children are familiar before joining school is a key element in the story.

Figure 5 Illustration from Quechua Reader, Year 2 Primary

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In the same Quecha reader learners are introduced gradually to Spanish words, presented in the context in which they are employed in the everyday world. The story illustrated in Figure 6, "Going to Town", describes the child shoe cleaners met in the market place and the fish dishes bought from the market food stall and advertsied in Spanish.

Figure 6 "Going to Town" Quechua Reader Year 2 Primary

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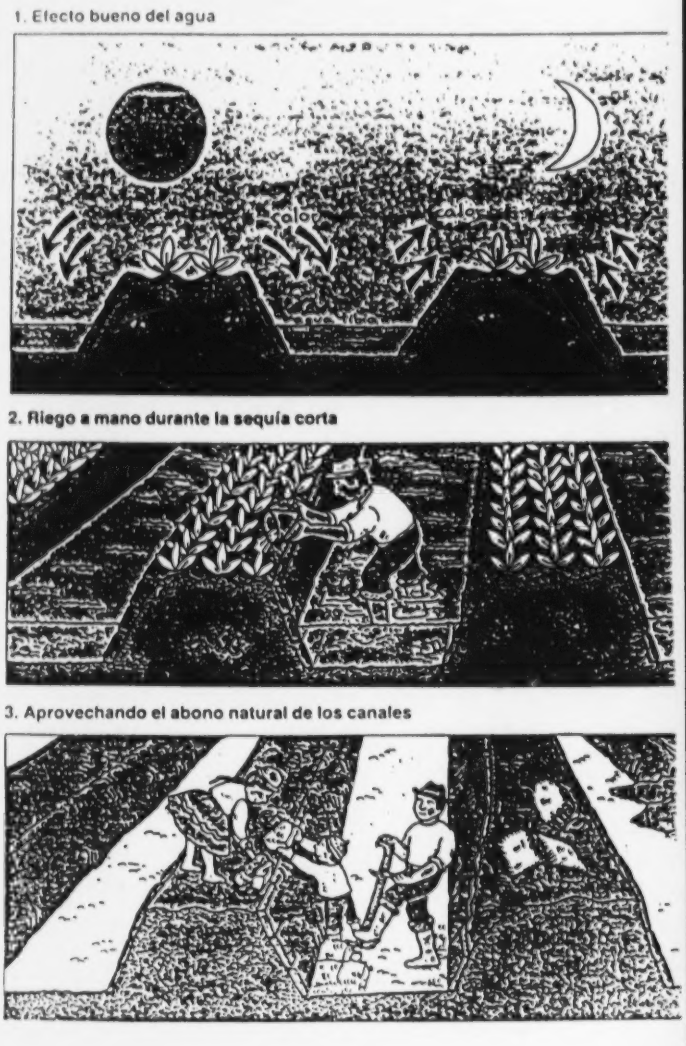
The nature study textbook for year 4 primary learners uses both Quechua and Spanish. In order to include measurement terms from the Quechua culture, a study was made of the everyday measurements used by children, adults and teachers. The measurement terms are presented in the Quechua language. In the same book a lesson on "How did our ancestors fertilise their soil?" is presented in Spanish and includes a discussion of the scientific principles on which the traditional irrigation canals, "los waru waru", were based.

Figure 7 Science Textbook Quechua/Spanish Year 4 Primary



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Many of the bilingual/intercultural programmes in Latin America combine a systematic programme of curriculum development with teacher training. Trainee teachers undertake extensive anthropological fieldwork to gain a better understanding of the technological, social and linguistic base of the communities of which they are members, to which they will return as teachers, and in which they will participate for their development as members of a multi-ethnic state.

Related thinking on the integration of knowledge content from alternative learning systems can be found in the field of health education. Reidmiller (1988) discribes how an understanding and exploration of everyday theories of plague in Tanzania should form part of the training for the development of village health workers professional competence. The potential for further development in this area is clear. Negussie (1988) examined the potential for building on the "traditional" perinatal knowledge of women in southern Shewa, Ethiopia for "modern competence". Claiming that traditional health knowledge is an invisible resource for development, she comments "it is mostly unknown to the external world, such as aid agencies and international planners: while it is usually known to national planners it is not fully utilised" (Negussie 1988 p. 244). But she also acknowledges a dilemma faced by many who seek to integrate knowledge systems. While many "traditional" health practices are beneficial, some are positively harmful. As Ohuche & Otaala put it, the problem is "what to revive and what to drop" (quoted in

Bude 1985).

Intra-national, intra-cultural borrowing between learning systems

In the first example, we saw how the out-of-school learning of a practical skill - playing the violin - in the United States of America borrowed from the learning and teaching strategies of another nation, Japan. In the second, we saw how an incomplete grafting of a white Australian formal school learning culture onto an Aboriginal learning culture has led to the emergence of a formal school culture defined as "Two-way schooling". In the third, bilingual/intercultural education, the active and conscious integration of the autochthonous language and associated culture and a second language and culture forms the basis of the curriculum of the formal school. In the fourth and final set of examples we see how culturally familiar learning strategies are used to convey new knowledge in out-of-school non-formal learning systems. In the following example, from Myanmar health messages about leprosy are being communicated via a long-established education delivery system (Cripwell 1988). "Undying Love" (Figure 8), was written by one of Myanmar's well known fiction writers Daw Ma Hyat Lay and tells of a young couple and their baby. The father contracts leprosy and, afraid of community attitudes, the parents flee their village leaving the boy in the care of a monastery. The boy grows up to become a community health worker and seeks out his parents, only to find that his father has recently died. He successfully persuades his mother to be treated at a clinic as she has now contracted the disease. The story content embodies three main health messages -

early identification, cure and treatment for disfigurement and improved social attitudes towards sufferers.

Figure 8 "Undying Love", Myanmar

Kidd (1980) would classify this as an example of the use of folk media for "propagating the ideas of modernisation". He cites

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many examples of this approach among them the use of government-sponsored mobile theatre and drama groups in India, Indonesia, Malaysia, Ghana, Mexico and China, for the communication of development messages in health, family planning and agriculture. He contrasts this approach with "popular theatre" in which "popular classes present and critique their own understanding of the world in relation to a broader aim of structural transformation" (Kidd 1980, p.281). The difference between the two is political, rather than technical reflecting a division in thinking about the exploitation of culture for development ends. Hall and Freyh (1980) identify two "camps". The first, the reformist/instrumentalists" seek to identify principles and tools for using "indigenous culture" within conventional development programmes. The second camp criticise this position, maintaining that it represents a "manipulation of peoples' culture to serve interests opposed to their development" (Hall and Freyh 1980 p.5). Popular culture can and should be used for development ends but only when popular organisations and groups decide for themselves when and how to use popular culture within a political strategy for overcoming opporession.

Although these two positions differ in their definitions of what constitutes legitimate development, both acknowledge the powerful role of familar forms of communication for new understanding and learning. The fundamental difference concerns the locus of the decision about change. Who is defining the direction of change? Who is borrowing or lending what aspect of which culture, from whom and to what end?

The intersection of Cultural Learning Pastures: Towards the future

The learner and educator

I have suggested that learning is a cultural process characterised by knowledge content (the WHAT of learning), learning strategies (the HOW of learning) and learning orientation (the WHY of learning) shared by members of social groups. By contrasting in-school and out-of-school learning cultures I hope to have demonstrated that all learners (whether as children or adults) approach new learning pastures with a wealth of learning experience behind them on which educators can build. And even when enrolled on an educational programme (whether formal or non-formal) most learners continue to inhabit three or four learning cultures simultaneously: the culture of the learning programme/institution, the home, the workplace, the community. All become part of the indigenous learning experiences on which the educator can build. The indigenous is not static. It changes with daily experience and becomes the base which the educated must attempt to apprehend and build from. While perfect substitution of one cultural learning pasture for another is neither technically possible, nor politically desirable, learning effectiveness in formal and non-formal learning programmes will be maximised if the educator makes contact with experience and knowledge which the learner brings from his or her participation in other cultural learning pastures.

Relations between Cultural Learning Pastures

Because of the enormous variation between cultural learning pastures between and within nations, little purpose is served by trying to identify universal **policies** and **plans** for cultural interaction and the maximisation of the **practice** of learning for all. At best, we can edge our way towards one or two general **propositions.**

Let us review the examples of cultural interaction presented earlier. American interest in the Suzuki method was roused almost thirty years ago. Two points are of special significance to our understanding of borrowing and lending between cultural learning pastures. First, the adaptation process has been gradual, slow and long-term. Second the economic and political context within which the adaption and adaptation of the Suzuki method has occurred appears to have involved an interaction of cultural pastures characterized by "free borrowing" rather than "lending". Two further points emerge from the Aboriginal experience. The aggressive lending by Balanda of Balanda learning culture, replete with knowledge content, learning strategies and learning orientations to Yolngu culture led to an unsuccessful grafting from donor to host and ultimate rejection. But the rejection has not led to the total isolation of one from the other. A new form of interaction in which Yolngu and Balanda participate as more equal partners has become possible within the context of increasing Yolngu control of the school system. The Bi-lingual Intercultural project in Peru illustrates some of the

practical curriculum and teacher education implications of cultural borrowing. In this example it was the base learning culture of the young learner which was borrowed by the multi-cultural educators. A conscious attempt has been made by them to validate literacy and numeracy in Quechua and at the same time to introduce literacy and numeracy in Spanish by building from Quechua culture. A key aspect of this programme is the close link between teacher origins (the teacher originates from the community), teacher education (the teacher in training studies his/her community) and curriculum development (the teachers participate in the development of curricula). In these respects the Peruvian example enjoys some parallels with the Australian. In the final example, the use of a delivery strategy from one type of non-formal learning system (the picture story-book) for communication in another (non-formal education in health) illustrates selective rather than wholesale exchange between cultural pastures. The example from Myanmar is but one of many which seek to use folk media for communicating the ideas of and knowledge for development. Approached from a purely technical angle there is no doubt that such strategies have enormous psychological value for learning gains. But few of the examples cited above can be approached in a purely technical way, as the debates in non-formal education have demonstrated. The reformist/instrumentalists seek to identify ways of using culture for conventional development programmes. The populists claim that this represents an exploitation and manipulation of culture to serve interests opposed to their own development. The use of such strategies is warranted, the populists would claim, only

when the groups whose culture is being manipulated decide for themselves that it should be so used. Two general themes emerge:

Borrowing and lending: unequal sides of the same coin?

American borrowing of the Suzuki method was gradual, slow and long-term. The borrowing was free and there was no pressure to lend. The exported technology has been adapted to American culture. The borrowing was economically and politically "free". The lenders placed no pressure on the borrowers to adopt the technique in a particular way - the only strings attached were those of a violin! In the Australian example the borrowing was economically cheap, but politically expensive. The educational transfer was incomplete.

Although borrowing and lending are, in one sense, two sides of the same coin, paradoxically these two sides of the same currency are stamped to a different value. "May we borrow from you?" and "May we lend to you?" imply different levels of initial economic and political interest on the part of the borrower and lender, and different long-term motivations on the part of borrower and lender. Adaptation, rather than rejection may be more likely to occur when one cultural pasture borrows educational content, strategy and orientation from elsewhere than when these are lent to it.

The locus of the integration decision: intra or extra-cultural?

At the beginning of this paper we referred to the knowledge dualism which has characterized the development of education in

many developing countries. The dualism characterises colonial and neo-colonial systems of education and is most acute when those who control decisions about curriculum content, evaluation and assessment, learning strategy and learning orientation represent social groups radically different from the one to which the learner belongs. The dualism is less marked when those who seek to change and develop a community are members of it themselves, and who participate in decisions about curriculum content, learning orientation and learning strategy. The bi-lingual, intercultural learning programmes in many Latin American countries approach this issue partly through teacher education programmes in which trainees study their own communities and participate in the process of curriculum development. The Australian example suggests that local control of the school system has been a necessary element in the move twoards a curriculum negotiation of learning content, strategy and orientation between Yolngu and Balanda culture. The locus of decisions about content, orientation and strategy may be critical for the long-term sustainibility of educational investment.

Implications for agents of education and development: tensions within EFA

From an aid agencies' point of view however both propositions will be difficult to contemplate and internalise. The development and implementation of projects through local (not necessarily national) control of learning content, strategy and orientation will be slow, gradual, conflictual and unlikely to lead to outcomes susceptible to the calculation of a rate of

return in the short term. Writing about sustainable development in general Ake (1988) comments

> "the notion of building on the indigenous will entail drastic and painful adjustments. (Agencies) will have to learn to suspend belief in a superiority of their knowledge and their values. They will have to think in terms of much smaller projects developed and implemented democratically and this will be maddeningly messy" (Ake 1988 p.19)

The extent and nature of the institutional structural adjustment on the horizon may be apparent in some of the tensions implicit in the formulation of EFA.

First is the tension between alternative definitions of appropriate learning goals. How will the tension between international, national and sub-national educational and political decision-makers work its way through to the individual learner, and how far will be the gap between each of these and the goals of the individual learner be narrowed?

Second, the Charter for WCEFA notes the increasing interdependence of national economic, cultural and environmental concerns and the implications of this interdependence for the learning of respect for cultural, religious, social and political systems other than "their own". To what extent will the learning of respect be built from the respect for one's own culture, and to what extent will the learning of respect for the others culture begin to replace the learning of respect for one's own culture?

Third, EFA focusses on the achievement of learning rather than on

enrollment and certification. All learners are to be given the opportunity of achieving an acceptable level of learning. Will there be a tension between the realisation of equality of access to learning opportunity, equality of resources to service that opportunity, and equality of learning outcomes?

Fourth, the documentation emphasizes the attainment **by all** of a "necessary level of learning achievement", "an acceptable level of learning". But how will the tension between **learning for all** and **selection of a few** be resolved in those systems which continue to use educational assessment as the main allocator of the life chances?

Fifth, who will define levels of necessary learning achievement, and how will they be assessed? Cultural definitions of learning goals vary - so too do strategies for assessing them. Yet there appears to be an increasing trend towards an internationalisation of educational assessment targets and practices. How will the tension between international assessment targets and practices and national targets and practices be resolved?

Sixth, if international standards, targets and assessment practices do begin to take precedence over national and sub-national standards what are the implications for nationally and culturally prescribed curricula? Will an internationalised educational assessment technology begin to drive an internationalised curriculum reform? What are the implications then for the growth and development of national and sub-national cultures? And how much wider will become the gap between the

cultural learning pastures of those who design international tests and international curricula and the base learning culture of the child from an isolated poor rural community destined for minimum economic survival at best, and starvation and death at worst?

Seventh, the EFA principles of action acknowledge the use of both "modern" and "traditional" media and technologies for educating the public on matters of social concern and to support basic education activities. Will there be a tension between the use by educators of "traditional" media for "modern" development ends and their reception by the learners, if the learners and their communities have not participated in the definition of what those ends should or could be?

Reversing the dominant flow of educational ideas and practice

It has been suggested in this paper that if effective learning is to take place by all, then those who bear responsibility for "educating" need to apprehend the cultural base of the learner and to present elements of the cultural pasture he/she seeks to share with the learner in a way which connects with pastures previously encountered by the learner. The imperative for the educator is one of learning from the learner, an imperative which must ripple through the education system from its base to is apex if EFA is to become a realisable goal having meaning for those it seeks to reach: the learners.

The education, training and professional development of teachers will be critical to this process and they, in turn, will need to

be supported by learning theories, philosophies and technologies adapted to their needs. Teachers and teacher educators will turn to their own training and professional development systems, in higher education. Those who train the trainers in turn will seek reinforcement and academic support for their work from international reference groups in universities, professional associations, international journals and international educational agencies.

A reversal of the conventional education and learning relation - teachers educate while students learn - is called for, if only temporarily. Teachers need to learn to apprehend the learning needs of their students, teacher educators the learning needs of their trainee teachers, the university lecturers the needs of their teacher educators, the international theorists, policymakers and gurus the needs of all. As C.E. Beeby was to comment

> "the educational theorists for the most part have stayed cosily in their rich countries without risking their theories in the rough and tumble of the poor ones...." (Beeby 1978 p.137).

Elsewhere I have suggested that educational theory, rooted in specific learning cultures, require grounded validation and possible reconstruction if they are to be usefully applied elsew here. "Learning **from** developing countries" is imperative for those in industrialised countries who seek to construct educational theories of universal applicability. Using the well-articulated American theory of learning motivation - attribution theory - as an example, I suggest that elements of the basic

model require considerable validation before its wholesale application. *In the case of attribution* theory Weiner (1985) has cautioned the theory-importer of its limitations and modifications. The problem is that the consumer is often constrained by so-called international standards and practice where the application and reproduction of models takes precedence over their reconstruction. The social and cultural reality facing learners in a specific country often appear to be of minor importance to those who recommend the theory to teacher educators and teachers (Little 1988). Similar lines of argument have been advanced with respect to models of foreign language learning in Africa (Obura 1989), in American Indian studies (Jaimes 1987) and in psychology (Moghaddan 1989).

The call for change in the way imported educational theory is used for the education of teachers and the education of learners also has implications for the way theory is created. Theory-application is one thing, theory-production another. International research in education in the future must find more ways of bringing together those who are developing and reconstructing theories of learning from radically different social/cultural contexts to highlight the culturally-universal and the culturally-specific in our knowledge about learning, and to validate the efforts of those who, working from a "minority" cultural perspective are in tune with the learning needs of members of that minority. Such cultural understanding may also lead to a reordering of educational league tables, a re-evaluation of "significant" educational developments to be

borrowed selectively from elsewhere, and an appreciation of the context-bound nature of some educational practices and principles.

In their search for cost-effective technical panaceas for "universal" problems, many international change agents borrow an apparently successful strategy or policy from one culture and elevate it to the status of international policy having universal relevance. The economic question is: under what conditions is such elevated decontextualisation cost-effective and under what conditions is it cost-ineffective? The cultural/political question is: who is borrowing and who is lending, and why?

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INTERACTIONS BETWEEN 'TRADITIONAL' AND 'WESTERN' SYSTEMS OF LEARNING: THE AUSTRALIAN EXPERIENCE

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1 Introduction

1. 1 The U.N. World Decade for Cultural Development has, as one of its prime objectives, the affirmation of cultural identity by "... finding ways to keep alive what is unique in each society without sealing it off from outside influences."[1] This poses a profound challenge for educators: how do we provide education for culture maintenance while at the same time promoting effective learning of western knowledge? The challenge is especially acute for educators working with indigenous minorities in industrialised societies, for experience has shown that the content and processes of western curricula are destructive of the values and knowledge systems of minority cultures. This paper will review the challenge from an Australian perspective, paying particular attention to interactions between 'traditional' and 'western' systems of learning.

1. 2 The indigenous people of Australia represent one of the oldest continuing cultures in the world, having occupied the continent as semi-nomadic hunter-gatherers for at least 50,000 years. Anthropological evidence from the Lake Mungo site in south-western New South Wales has revealed some of the earliest known remains of the modern, gracile form of *homo sapiens sapiens* in the world, the earliest known use of grave decorations and ritual cremation, and a remarkable degree of cultural continuity over a 32,000 year time span.[2] While their nomadic lifestyle resulted in a somewhat limited material culture the Aboriginal people have a rich spiritual and ceremonial life and complex patterns of social organisation. The settlement of the continent by Europeans during the past 202 years has had an exceedingly detrimental impact on Aboriginal Australians, and they now comprise a mere 1.5 percent of the total population of 16.25 million. Only those living in the more remote central and northern regions of Australia have been able to sustain a tradition-oriented lifestyle, retaining the vernacular as their first language.[3] These tradition-oriented groups, comprising less than half of the present Aboriginal population, will be the prime focus of this paper.

1. 3 Most tradition-oriented Aboriginal people are committed to language and culture maintenance while at the same time seeking to give their children the English language, literacy and numeracy skills that will allow them to interact with the wider society. Parents typically express this as wanting their children to 'grow up Aboriginal' but also to 'learn reading, writing and counting'. Yet the modes of teaching required for transmission of these two sets of knowledge are very different, and reflect the wide disparities between

Aboriginal and western systems of learning. In fact, traditional Aboriginal systems in many ways are incompatible with contemporary western systems, and even well-meaning and sensitive attempts to foster the latter can be detrimental to the goal of culture maintenance. Fortunately this area has seen considerable research and reflection by both Aboriginal and non-Aboriginal educators during the past fifteen years, and current theoretical analyses of relationships between culture and learning are producing some innovative approaches to the education of Aboriginal children.

2 Aboriginal world view

2. 1 In order to understand Aboriginal systems of learning we need to recognise that they derive from a world view that is ontologically and epistemologically different from that of western society. Harris argues that the Aboriginal people have an alternative way of seeing reality, that there are fundamental differences in the way they conceptualise how people relate to each other and to the universe.[4] Stanner expresses a similar view: "We are dealing with two distinct logics of life."[5] The following discussion will examine several key features of Aboriginal world view and the learning characteristics deriving from them.

2. 2 **Definitions of childhood**. Aboriginal perceptions of childhood are substantially different to those of western society. From as early as two or three years of age children are encouraged to be independent of adult caregivers and to accept responsibility for their own decisions. The peer group rapidly becomes a major socialising influence. Children are not forced or even directed to behave in particular ways and therefore quickly achieve high levels of personal autonomy, this being reflected in adult-child relationships that attain much greater equality than occurs in western society. Consequently adults are not a significant source of extrinsic motivation to learn, except perhaps for short periods during initiation. Motivation is basically intrinsic, with the peer group providing a secondary extrinsic source.

2. 3 **Social relationships**. Within Aboriginal society all relationships are prescribed within a complex and carefully structured network based on gender, generation level, moiety, section and subsection. Mutual obligation and avoidance rules are observed. Altruism does not exist as we understand it in western society; assistance and support are provided to particular categories of kin as a natural obligation. Consequently most Aboriginal languages have no vocabulary for the expression of thanks. Patterns of loyalty and obligation within the kinship system require children to learn certain skills only from certain relatives. Learning therefore is person-oriented rather than information-oriented and thus highly dependent upon the nature and quality of the social relationships involved.

2. 4 **Ownership of knowledge**. Unlike western society where virtually all knowledge is public and thus accessible to anyone with the intellect and determination to seek it out, a great deal of knowledge in Aboriginal society is secret and therefore exclusive to particular groups or individuals. The more exclusive a body of knowledge (i.e., the fewer the number of people who have access to it) the more powerful and prestigious that knowledge becomes. Knowledge is possessed by carefully defined rights of inheritance, ownership being determined by such criteria as age, gender, birth order and family affiliation. Prior to initiation children have rights to only very limited bodies of knowledge, especially in the spheres of ceremony and ritual. The provision of western knowledge to schoolchildren is seen to undermine the authority of older people and some communities arrange for the latter to review curriculum materials prior to their use in school.

2. 5 **Unity of knowledge.** Paramount to Aboriginal world view is the coherence of land, people, nature and time. Values lie in quality and relatedness, not in quantities. The spiritual dimension acts as an integrating force, pervading all aspects of life. The compartmentalisation of knowledge into discrete disciplines that occurs in western education is meaningless in an Aboriginal context. Furthermore, as Christie points out, "... all western notions of quantity - of more and less, of numbers, mathematics and positivistic thinking - are not only quite irrelevant to the Aboriginal world, but contrary to it. ... A world view in which land, spirit beings, people and trees are all somehow unified does not lend itself to scientific analysis".[6] For the Aboriginal child, then, meaning lies in wholeness. Learning tasks are not broken down into components and practised separately, but as a totality. The interrelatedness of knowledge is stressed; quantification and analysis of knowledge do not occur.

2. 6 **Time orientation**. The unity of Aboriginal knowledge is reinforced by its ability to transcend western constraints of time and space. Its time frame is past-continuous, seeking harmony within a cyclic rather than a linear context. Thus, for tradition-oriented Aboriginal people, the present is continually rolling back into the past, while the past continues to live on in the present. Education has the role of preserving this stability and continuity. In western society, of course, time is seen as linear, and rolls forward into the future. Consequently western education involves preparing for future activities and experiences. Christie expresses it thus: "It is as if as whites, our dreaming lies in the future. The mythology which underlies white education involves progress, change, making a better world, whereas the mythology which underlies Aboriginal education is tied with the past, with retaining rather than creating the better world".[7]

2. 7 **Existence and behaviour.** The preservation of continuity is closely associated with a world view that emphasises 'being' rather than 'doing'. As with other hunter-gatherer societies, the Aboriginal people have recognised that survival depends on co-operation and coexistence, both with nature and people. In agrarian and industrialised societies, however, manipulative behaviour is required, involving control over the environment and the use of human relationships as means to an end. Bain argues that this is the essential ontological contrast between Aboriginal and western societies, labelling it the interactional/transactional dichotomy.[8] Harris makes a similar distinction between what he calls a "responsive approach" (where people 'fit in' with what is happening around them) and a "manipulative approach" (where things are made to happen).[9] Christie has applied the distinction to learning behaviours, identifying them either as 'meaningful' or 'purposeful'. Meaningful behaviour is directed at developing and maintaining "the meaningfulness of one's life"; it has more to do with participating and experiencing than with active cognition. Purposeful behaviour, on the other hand, is consciously goal-directed and seeks to establish a sense of personal control over a situation.[10] Since these behaviours reflect opposing views of reality, Aboriginal children, brought up in an interactional context that stresses co-existence, are ill-prepared for encounters with western schooling with its emphasis on the transactional, the manipulative and the purposeful.

2. 8 **Truth and belief.** Aboriginal consciousness is pervasively religious. All questions of truth and belief have been answered already in the law and the dreaming. Aboriginal learners are not expected to analyse or question the basis of belief, even when dissonance exists. Theirs is a 'closed' system with cause and effect relationships having a religious rather than a rational explanation. This contrasts with the openness of western thought that encourages a scientific and analytical approach aimed at resolving dissonance between conflicting sets of beliefs. Where westerners seek logical harmony in their explanations of reality Aboriginal people have a tolerance for ambiguity; what they believe is more important than what they understand.[11] Knowledge therefore is not queried or challenged, and from an early age curiosity in children is deliberately discouraged.

2. 9 **Summary**. There are fundamental differences between Aboriginal and western world views. From both ontological and epistemological perspectives some observers argue that there are no two more different cultures in the world, and that many of the differences are antithetical. Learning characteristics deriving from these world views likewise diverge widely, even to the point of incompatibility. An attempt has been made to summarise some of the major differences in Table 1.

Table 1. Culture and learning: a summary

Elements of culture	Associated learning characteristics	
	Aboriginal	**western**
Personal responsibility and autonomy	high autonomy; intrinsic motivation to learn	low autonomy; extrinsic motivation to learn
Social context	learning is person-oriented	learning is information-oriented
Ownership of knowledge	Private; limited access for learning	Public; open access for learning
View of knowledge	emphasis on unity and wholeness	compartmentalised; quantification and analysis stressed
Time orientation	learning from the past; preservation of stability and continuity	learning for the future; preparation for progress and change
Explanations of existence	interactional; co-existence with nature; preservation of meaningfulness	transactional; manipulative; purposeful learning
Truth and belief	tolerance for ambiguity; knowledge not questioned; curiosity discouraged	resolution of dissonance by analysis and questioning

3 Traditional systems of learning

3. 1 We turn now to a consideration of the particular systems of teaching and learning that have evolved in Aboriginal society in response to the above world views and associated learning characteristics. The overriding feature of the Aboriginal system is its dependence on informal learning strategies; i.e., most knowledge is acquired incidentally through the day-to-day processes of socialisation. Learning generally is self-motivated, it is not consciously goal directed, and it has little need for verbal explanation. Table 2 summarises the major characteristics of informal Aboriginal learning strategies, comparing them with the formal strategies of western schooling. The following discussion will examine in more detail some of the informal learning systems of Aboriginal society.[12]

3. 2 **Learning by observation and imitation.** Because of the integrated nature of everyday life in Aboriginal society children are constantly exposed to adult activities and are encouraged to participate in many of them. Learning thus becomes an unconscious process of observation, imitation and role playing, rather than a process of formal verbal instruction. Virtually all survival, social and artistic skills are acquired by observation and imitation. This form of experiential learning is time-consuming, motivation is intrinsic and verbalisation redundant.

3. 3 **Learning by personal trial and error**. Most Aboriginal survival skills are acquired through learning-by-doing in concrete situations with the learner being more or less physically active. Participation is voluntary and errors do not incur discredit or shame.

3. 4 **Learning through real-life performance**. Most western learning takes place in contrived settings practising artificially-structured activities as a means to a future end. In contrast, almost all Aboriginal learning is a part of "... an ongoing living out of daily activities: it is done while one lives, not done to improve one's future living ... activities are nearly always done for their own sake, and not so that someone may learn something".[14] Such learning tends to be context-specific; i.e., the principles or skills learned in one setting are not normally generalised to another.

3. 5 **Learning through successive approximations**. Aboriginal learning requires very little emphasis on the sequencing of skills, and there is more learning of wholes than of parts. Most learning occurs through successive approximations to the mature end product. In learning a particular dance, for example, children simply will join in and perform as much as they can, improving over time through successive approximations to the correct form.

Table 2. A comparison of Aboriginal and western learning strategies[13]

Informal learning strategies of Aboriginal societies	Formal learning strategies of western schooling
Context	
Learning takes place in the context of everyday life.	Learning is decontextualised in settings abstracted from real life.
Medium	
A variety of modalities is employed. Language is a relatively unimportant aspect of an integrated behavioural pattern.	Language is essential. Other modalities usually are irrelevant. Classroom language is decontextualised and cognitively demanding.
Content	
Emphasis on skills, and to some extent facts and ideas. Content is immediately applicable to everyday life.	Formal learning is an end in itself. Most formal learning depends upon acquisition of the codes of education - reading, writing and mathematics. Application of learning to real-life contexts is delayed, often for long periods.
Structure	
Learning takes place incidentally during the socialisation of an individual into the culture. No specialised office of teacher. Proficient adults and peers provide role models, often unconsciously. Flexible time constraints.	Education is consciously planned and delivered to groups of learners by agents specifically selected to fulfil the role of knowledge transmitters. Structured time constraints.

3. 6 **Learning by persistence and repetition.** Contemporary western society places strong emphasis on analysis and efficiency. Productivity is associated with continuous technological improvement, awareness of the passing of time, frequent assessment of progress and an atmosphere of competition. None of these behaviours occurs in Aboriginal society. Instead, Aboriginal problem-solving behaviour tends to substitute persistence for analysis and repetition for efficiency. Productivity requires maintenance of existing procedures and technology. Thus, for the child who lacks proficiency at spearing fish, the problem is solved not by technological change in the form of hook, line and sinker, but by persistent and repeated practice.

3. 7 **Summary**. The informal learning system that has evolved over tens of thousands of years in traditional Aboriginal society contrasts markedly with the formal system of modern industrialised nations. The two systems appear incompatible, thereby posing a major dilemma for educators working in settings where the systems interact. This dilemma will be addressed in the following section.

4. Interactions between systems

4. 1 Implementation of a western system of learning in Aboriginal schools seems almost certain to be destructive of some traditional values and beliefs. Aboriginal culture is clearly vulnerable when confronted by a world view that emphasises quantification, positivism and scientific thought. However the Aboriginal response to formal western schooling has been characterised by two patterns of behaviour: resistance and ritualisation. In both cases these behaviours appear to buffer children from at least some of the negative impacts of western learning systems. Correspondingly, of course, they inhibit the effectiveness of western knowledge acquisition.

4. 2 **Resistance**. Patterns of resistance to the invasive aspects of formal western schooling, ranging from simple non-attendance to more complex non-participatory and/or disruptive classroom behaviour, have been documented by a number of researchers. Folds, for example, identifies four forms of resistance behaviour he has observed in central Australian schools: absenteeism; ridicule of the teacher (usually sufficiently subtle to pass unrecognised by its target); disruption (challenging the authority of teachers at a level slightly below their perceived threshold of anger); and the 'wall of silence' (non-communication with the teacher and non-response to teacher directions).[15] In schools where the use of these patterns of resistance becomes widespread there is clear evidence of a decline in the effectiveness of western knowledge acquisition.

4. 3 **Ritualisation**. Unlike resistance behaviour, ritualised responses are not deliberate but reflect underlying cultural perceptions based on an interactional world view (refer to paragraph 2. 7). In his research on meaningful learning behaviour Christie showed that his Arnhem Land subjects believed they would attain their education in three ways: (i) Their mere presence in school would ritually endow them with education in the same way that religious knowledge is conferred upon people through their participation in ceremonial or other ritual activity. (ii) The ritualised performance of stereotyped classroom activities (e.g., copying from the blackboard) would make schooling efficacious; i.e., the ritual enactment would of itself be sufficient, like the dance in a ceremony. (iii) Educational status would be achieved by successful progression through the age grade stages as they moved up through school (rather than by any particular school-learned skill like the ability to read and write).[16] Ritualised behaviour clearly is antithetical to the purposeful learning behaviour required for effective acquisition of western knowledge. The creative and self-directed effort that is crucial to western academic learning is considered not only irrelevant but culturally inappropriate in Aboriginal society.

4. 4 There is now extensive anecdotal and research evidence to show that ritualised and resistance behaviours are widespread in Aboriginal classrooms, and that they hinder the effectiveness of the western learning system. They also act as powerful buffers against some of the detrimental impacts of that system on Aboriginal culture, although not entirely successfully, for there is equally clear evidence that cultural identity continues to be undermined, often in quite subtle and pervasive ways, by western schooling processes. In other words *the incompatibilities between the Aboriginal and western systems of learning have resulted in a situation where neither of the two goals of Aboriginal schooling adequately has been achieved.* In many communities western knowledge has not been acquired at a level sufficient for functional use in the wider society, nor have the goals of language and culture maintenance resulted in effective renewal of Aboriginal identity. The dilemma therefore remains.

5 The search for solutions

5. 1 During the past fifteen or so years both Aboriginal and non-Aboriginal educators have searched for ways of resolving the dilemma posed by incompatibilities between the two systems. It has been recognised that the only effective solutions will be those developed from within Aboriginal communities, not those imposed from without. Furthermore, because of cultural, linguistic and adaptive variations between Aboriginal groups, solutions are likely to differ from one context to another. The following discussion will review both practical and theoretical attempts to find solutions.

5. 2 **The independent Aboriginal school movement.** In a number of communities Aboriginal people have established their own schools or taken over control of existing facilities. One of the earliest and most successful attempts was that of the Aboriginal people holding the Strelley pastoral lease in the Pilbara region of Western Australia. An unusually strong and determined group, the 'Strelley Mob' achieved economic independence and control over their own affairs as early as 1946. In the mid 1970s they were placed under government pressure to have schooling provided for their children, and so decided to establish their own school in their own way, totally free of outside interference. The success of the venture encourage other groups, and with support from Strelley a network of independent schools has developed in the north-west of Western Australia, including those at Jigalong, Noonkanbah and Punmu. These schools share a number of features:

(i) They are fully controlled and administered by the local Aboriginal communities.

(ii) Although trained non-Aboriginal teachers are employed they are expected to work at all times under the direction of community leaders.

(iii) Community observation of and participation in all school activities is encouraged; community ownership is stressed.

(iv) Children are taught in kin rather than age groups, taking account of avoidance relationships.

(v) Traditional authority structures are maintained by first presenting western curriculum content to older community members.

(vi) Strong emphasis is placed on maintenance of traditional languages; vernacular literacy programs are given high priority.

By constantly reviewing decisions about curriculum content and process community leaders seek to avoid any negative consequences of the western system while taking active steps to promote culture maintenance. Although there is clear evidence that cultural goals are being achieved, however, there are relatively fewer indications that functional levels of western knowledge acquisition are being attained.[17]

5. 3 **The outstation movement**. In recent years many Aboriginal groups have acquired legal title to their own land. With land rights has come increasing independence and renewal of cultural identity. Associated with these developments has been a most significant but unobtrusive social change as Aboriginal people have moved out in small extended family groups to reoccupy traditional lands. Throughout central and northern Australia there has been a quiet dispersal from larger communities to what have become known as 'outstations' or 'homeland centres'. As well as reaffirming spiritual ties to the land this movement has allowed a return to more traditional lifeways and less formal patterns of schooling. Although there is wide procedural diversity a kin group typically

will allocate responsibility for the education of children to two or three of its adult members, some form of shelter will be provided, and for certain periods each day children will participate in a school program. Most outstation schools link up with an established hutbschool and receive teaching materials and the support of a visiting teacher. Once again ther is clear evidence that the schools are playing an important role in the renewal of cultural identity, sometimes in quite remarkable ways.[18] Conversely, however, there is little evidence that functional levels of western knowledge are being acquired.

5. 4 **The Hermannsburg model**. One of the earliest outstation movements took place at Hermannsburg, a large Lutheran community in central Australia. A distinctive pattern of education was developed based on a decentralised model. Trained teachers stationed at the hub school visited each outstation for two hours per day, their responsibilities being limited to the teaching of English language, literacy and numeracy. Instruction was carried out in the open air or in a shelter provided by the community. All other forms of education were provided by family members within the informal setting of the camp. Although this pattern has been maintained for almost a decade some parents now are transporting their children back into Hermannsburg each day for formal full-time schooling. Their central concern appears to be the limited achievement of their children in western learning.

5. 5 **Two way learning**. The Catholic church has a long history of involvement with Aboriginal people of the Kimberley region in the north of Western Australia, and a number of community schools operate under its aegis. These schools have evolved a concept of "two way learning" that underlies all curriculum planning. It emphasises the need for children to learn "both ways of life" - the Aboriginal and the western - through "sharing and exchange between the two sides".[19] Implementation involves Aboriginal decision-making, integration of school and community, the strengthening of teaching-learning relationships between older and younger members of the community, and the development of flexible school structures. The most recent policy document calls for the introduction of Aboriginal language and culture programs in all schools alongside the learning of English language and the "standard Australian curriculum". It goes on to comment, however, that "(t)he question of how exactly the two strands can be put together is one that is only just now being worked out in many schools".[20] Clearly this "putting together" will require communities to address the central dilemma of incompatibilities between the strands.

5. 6 **The two way school**. Elsewhere in Australia the idea of two-way learning has led to the more inclusive concept of the "two way" or "both ways" school. The concept has been applied most clearly at Yirrkala, a large community in north-east Arnhem Land where the state school is staffed and administered by trained Aboriginal teachers, one of

whom, Wunungmurra, has written: "It is through an exchange of meanings that we can produce a 'two way' school curriculum which will give our children the flexibility to live in both Yolgnu (Aboriginal) and Balanda (European) worlds. To live in both worlds we need to achieve a high standard in [western] education but to keep our own identity".[21] He goes on to describe the major features of the school: (i) Aboriginal ownership of the school program is recognised; (ii) Aboriginal people are taking the initiative in shaping, developing and implementing the program; (iii) clan elders come in to the school to teach, thus re-affirming relationships between younger and older generation levels; (iv) children are organised by clan and family relationships and by separating boys and girls; (v) flexible structures allow for recognition of traditional ceremonial obligations, especially during initiation; and (vi) equal respect is given to Aboriginal and western knowledge; the exchange of knowledge is stressed.[22]

5. 7 **Culture domain separation**. Two way schooling appears to hold the potential for dealing with many of the detrimental influences of the western learning system on Aboriginal culture and identity. Harris, however, argues that current two way models do not go far enough in countering some of the more pervasive effects. One of his central concerns, for example, is that interactions between the two systems will continue to open the way for the unconscious application of western positivism and scientific analysis to Aboriginal knowledge. He therefore proposes a conceptual framework based on complete culture domain separation in the school; i.e., he believes that schools should reduce as far as possible any opportunities for the two systems to interact by providing separate areas for teaching, separate bodies of content and separate teachers for each culture domain. He expresses his theory thus:

> If a school is to be an agent of minority culture maintenance as well as academic success in the terms of the majority culture, the smaller the minority language group ... and ... the wider the difference in world view between the two groups, then the greater the need to promote culture domain separation in school. This suggests a culturally compartmentalised two-way school, with students learning to adopt appropriate roles in each situation, while maintaining personal identity in the primary culture.[23]

He goes on to suggest that the maintenance of personal identity in the primary culture be achieved by treating all aspects of the western system as " ... a kind of giant role play" where children learn consciously " ... to put on and take off [western] roles, almost like a set of clothes".[24] He believes this to be the only strategy to counter the unconscious adoption of western learning behaviours and their transfer to Aboriginal learning contexts.

5. 8 **Negotiation of meaning**. McTaggart argues that domain separation denies the capacity of Aboriginal people to deal with the western system of learning. He implies that incompatibilities need to be analysed, not avoided.[25] This is consistent with the work of Crawford who developed a process of negotiating meaning by comparative analysis of Aboriginal and western learning systems and their respective knowledge bases.[26] Working in the field of mathematics with Aboriginal adults enrolled in an on-site teacher education program in Pitjantjatjara communities in the far north-west of South Australia, Crawford entered into a complex process of exchanging mathematical meanings that allowed participants to achieve a deeper understanding of the western system while reaffirming their own cultural knowledge and identity. Although the process was a slow and exhausting one, participants reportedly felt much more confident to interpret and explain western mathematical knowledge to children. The concept of negotiated curriculum also has been developed at Yirrkala school (refer to paragraph 5. 6), Wunungmurra comparing it with the traditional negotiation of meanings that takes place between moieties in Aboriginal society.[27] He stresses that negotiation must take place under the influence of *Rom* (Aboriginal law), and the role of elders must be respected.

5. 9 **Voluntary isolation.** In several of the most remote areas of Australia small groups of Aboriginal people have withdrawn their children completely from any direct exposure to western knowledge, preferring to bring them up exclusively in the Aboriginal way. Some would argue that this option be encouraged, pointing out that once cultural identity has been firmly grounded during childhood and initiation, then western knowledge can be provided far more quickly, efficiently and less destructively during the early adult years.

6. Conclusions

6. 1 Like other indigenous minorities the Aboriginal people of Australia express a strong desire to reaffirm and consolidate their traditional values while also gaining access to the skills and knowledge of western society. They seek not to resist change but to adapt at a pace that ensures effective maintenance of cultural identity. To achieve the dual goals of culture maintenance and western knowledge acquisition, however, requires them to use two seemingly incompatible systems of learning, interactions between these systems having the potential to be counterproductive of goal achievement. This poses a major dilemma for educationists.

6. 2 The dilemma appears to be moving towards resolution, both in theory and practice. Central to the solutions that are emerging are Aboriginal ownership and control of curriculum content and process, compliance with traditional patterns of social organisation

and authority, close integration of school and community, and the development of flexible school structures. Once these basic conditions are met the more specific concepts of two way schooling, culture domain separation and negotiation of meaning seem to offer constructive ways of dealing with the negative impact of the western learning system on Aboriginal beliefs.

6. 3 It is clear that no universal solution will be found. Socio-cultural conditions vary widely and a model that works in one setting is not assured of success in another. At this stage the various approaches that are evolving appear more successful in strengthening cultural identity than promoting western knowledge acquisition. Nevertheless the future does look promising as Aboriginal people increasingly assume control of their children's schooling and discover ways of preserving their own unique identity while participating on their own terms in the wider society.

Footnotes

1. Refer to *UN Chronicle,* 26(2), 1989, p 41.

2. For a summary of the Lake Mungo findings refer to Flood, J. *Archaeology of the dreamtime*, Collins, Sydney, 1983.

3. Of the estimated three hundred distinct (i.e., mutually unintelligible) languages that existed in Australia two hundred years ago only about forty are now in everyday use, and only about fifteen are being taught in schools.

4. Harris, S.G. *Two-way Aboriginal schooling*, Aboriginal Studies Press, Canberra, 1990.

5. Stanner, W.E.H. *White man got no dreaming: essays 1938-1973*, Australian National University Press, Canberra, 1979.

6. Christie, M.J. *Aboriginal perspectives on experience and learning: the role of language in Aboriginal education*, Deakin University Press, Geelong, 1985, p.11.

7. Christie, M.J. The invasion of Aboriginal education. Paper presented at the 'Learning my Way' National Conference on Adult Aboriginal Learning, Perth, September 1988. Cyclostyled, p.7.

8. Bain, M.S. At the interface: the implications of opposing views of reality. Unpublished M.A. thesis, Monash University, Melbourne, 1979.

9. Harris, *Two-way ... schooling*, chapter 2.

10. Christie, M.J. and Harris S.G. Communication breakdown in the Aboriginal classroom. In Pride, J., ed., *Cross cultural encounters,* River Seine, Melbourne, 1985.

11. Harris, *Two-way ... schooling*, chapter 2.

12. The discussion in paragraphs 3.2 to 3.6 is based almost entirely on the pioneering research of Harris at Milingimbi, published most recently in Harris, S.G. *Culture*

and learning: tradition and education in north-east Arnhem Land, Australian Institute of Aboriginal Studies, Canberra, 1984.

13. Table 2 has been adapted from Christie, *Aboriginal perspectives* ..., p.56.

14. Harris, *Culture and learning*, p.89.

15. Folds, R. *Whitefella school: education and Aboriginal resistance*, Allen & Unwin, Sydney, 1987. Folds provides examples of all four resistance behaviours, pp.38-42.

16. Refer to (i) Christie and Harris, Communication breakdown ..., p.4 and (ii) Christie, *Aboriginal perspectives* ..., pp.46-51 for a fuller discussion of school ritual.

17. (i) Bucknell, J. Listening to Aboriginal voices: the school at Strelley. In Sherwood, J. ed., *Aboriginal education: issues and innovations*, Creative Research, Perth, 1982, pp.81-94.
(ii) Teasdale, G.R. and J.I. Rekindling the flame - Aboriginal initiatives in education, *Unesco review*, 12, August 1986, pp.2-4.
(iii) Vallance, R. and D. Punmu Wangka: a 'right way' desert school curriculum 1984-87, *Curriculum Perspectives*, 8(2), October 1988, pp.71-76.

18. A comprehensive analysis of the outstation movement has been made in Downing, J. *Ngurra walytja, country of my spirit*, Australian National University North Australia Research Unit, Darwin, 1988.

19. *Two way learning: language and culture in schools*, Revised edition, Kimberley Catholic Education Language Team, Broome, December 1988, pp.5-6.

20. *Two way learning* ..., p.7.

21. Wunungmurra, W. 'Dhawurrpunaramirra' finding the common ground for a new Aboriginal curriculum, *Curriculum Perspectives*, 8(2), October 1988, pp.69.

22. Wunungmurra, 'Dhawurrpunaramirra' ... pp.69-71.

23. Harris, *Two-way ... schooling*, Chapter 1.

24. Harris, *Two-way ... schooling*, Chapter 3.

25. McTaggart, R. Aboriginal pedagogy versus colonisation of the mind, *Curriculum Perspectives*, 8(2), October 1988, pp.83-92.

26. Crawford, K. Bridging the gap: bicultural teacher training in mathematics education for Aboriginal trainees from traditional communities, *South Pacific Journal of Teacher Education*.14(1), April 1986, pp.44-55.

27. Wunungmurra, 'Dhawurrpunaramirra' ... pp.69-71.